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ABSTRACT

This document contains papers from 35 symposia as well as 2 keynote presentations at the 1996 Academy of Human Resource Development (AHRD) conference. The symposia are on the following topics: (1) HRD town forum; (2) HRD and business outcomes; (3) action learning; (4) evaluation issues in HRD; (5) rethinking diversity; (6) HRD in selected nations; (7) orchestrating work and learning; (8) HRD models in Europe; (9) high involvement work teams; (10) instructional technology; (11) learning research; (12) work force issues; (13) career development; (14) change process in organizations; (15) instructional delivery; (16) HRD journals; (17) core directions in HRD; (18) learning organization; (19) transfer of training; (20) cross-cultural HRD; (21) contextual learning issues; (22) expertise in organizations; (23) career development/special needs; (24) practitioner states; (25) structured and unstructured learning; (26) leadership and management development; (27) diversity in the workplace; (28) university instruction in HRD; (29) performance improvement; (30) partnership research; (31) evaluation systems in HRD; (32) team building; (33) training practices; (34) HRD academic programs; and (35) status of HRD research. The two keynote papers address HRD integrity through business-research partnerships: "Partnering for Research: The Ford Design Institute/UGA Research Project" (Karen E. Watkins, Lewis J. Bellinger) and "The Partnership Journey from Satisfaction to Performance: Human Resource Development Becomes a World-Class Business Partner" (Timothy R. McClernon; Richard A. Swanson). Papers contain references. (SK)

ED 403 461

ACADEMY OF HUMAN RESOURCE DEVELOPMENT

1996 Conference Proceedings

February 29 - March 3, 1996
Minneapolis, MN

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1996 CONFERENCE PROGRAM

Radisson Plaza Hotel Minneapolis Feb. 29 - March 3, 1996

The Academy of Human Resource Development
8140 Burnet Road, P.O. Box 9598
Austin, Texas 78766
USA

512-323-2736 Fax 512-371-7449

OVERVIEW OF THE 1996 CONFERENCE

Conference Theme: "Performance with Integrity"

	Thursday Feb. 29, 1996	Friday March 1, 1996	Saturday March 2, 1996	Sunday March 3, 1996
7:00-8:15 am		• AHRD Committee Meetings • Food-N-Thought: Discussion and meal groups, join in!	• Food-N-Thought: Discussion and meal groups, join in!	• AHRD Board Meeting • Food-N-Thought: Discussion and meal groups, join in!
8:30- 10:00 am		*--Keynote Presentation--* **Kenneth Melrose**, CEO, The Toro Company *A CEO's JOURNEY TO LEADING BY SERVING*	*--Keynote Presentation--* **David C. Korten**, Pres., The People-Centered Develop. Forum *WHEN CORPORATIONS RULE THE WORLD*	SYMPOSIUMS • [30] Eval Systems in HRD • [31] Team Building • [32] Training Practices • [33] HRD Academic Programs • [34] Status of HRD Research
Break				
10:15-11:45 am		SYMPOSIUMS • [1] HRD&Business Outcomes • [2] Action Learning • [3] Evaluation Issues in HRD • [4] Rethinking Diversity • [5] HRD in Selected Nations	SYMPOSIUMS • [16] Core Directions in HRD • [17] Learning Organization • [18] Transfer of Learning • [19] Cross-Cultural HRD • [20] Contextual Learning Issues	*--Keynote Presentation--* **Timothy McClernon**, CIGNA **Lewis Bellinger**, FORD *The company view of PARTNERSHIP RESEARCH*
12:00 noon	Conference Registration Opens (12noon-8:00pm)	• Food-N-Thought:Discussion and meal groups, join in! • ASTD Research Committee	• Food-N-Thought: Discussion and meal groups, join in!	12noon-1:00pm AHRD Business Mtg. for all Academy Members
1:30-3:00 pm	12:00- 3:00pm AHRD Board of Directors Mtg. 3:30-5pm AHRD Committees 3-4:00pm Showcase of Host Universities , U. of Minnesota & U. of St. Thomas Programs 4-4:30 Reception for HRD Graduate Students by U of Minnesota & U. of St. Thomas *---Important Networking--*	SYMPOSIUMS • [6] Orchestrating Work&Learning • [7] HRD Models in Europe • [8] High Involve. Work Teams • [9] Instructional Technology • [10] Learning Research	SYMPOSIUMS • [21] Expertise in Orgs. • [22] Career Dev./Spec. Needs • [23] Practitioner States • [24] Structured&Unstruct. Learn	Lunch & hotel checkout 1-2:00pm AHRD Board of Directors Mtg.
Break				
3:30-5:00 pm		SYMPOSIUMS • [11] W'kforce Issues • [12] Career Development • [13] Change Process in Orgs. • [14] Instructional Delivery • [15] HRD Journals	SYMPOSIUMS • [25] Leadership & Mgt. Dev. • [26] Diversity in the Workplace • [27] Univer. Instruction in HRD • [28] Performance Improvement • [29] Partnership Research	
Evening	6-7:00 pm Grand Reception & Conference Overview 7-8:30pm • HRD Town Forum --- HRD WITH INTEGRITY--- Victoria Marsick & Ronald Jacobs	FREE EVENING! 6:00pm HRDQ Editorial Board Mtg & Dinner 6:00pm Global 100 Mtg. & Dinner	6-8:00pm President's Dinner for all Conference Attendees (included in registration)	

- Overview of the conference symposiums.
- Symposiums are numbered sequentially [1] to [34] here, on the full "Conference Program," and in the "Conference Proceedings."
- Conference 'Central' will be open continuously! ....registration, exhibitors, bookstore, etc.

From the Editor

Welcome to Minneapolis! After last year I never thought I would say it, but this year's proceedings is bigger than ever, reflecting continued strong growth of the Academy. Every paper that met the publication deadline is included. That adds up to 123 papers and 184 scholars contributing 850 pages of new research, theories and debates to stimulate our dialogue. I think you'll be as excited as I am after you see the papers.

I hope you enjoy this year's proceedings. As always, we want your feedback so we can make it even better next year. Please take a minute to read these tips on using it.

Tips on Using the Proceedings:

1. **Papers are grouped by symposium number**. Symposium numbers can be found in the program immediately following this note.

2. **Only those sessions that have a number to the left of the title have papers included.** There are no papers for the keynote or lunch sessions.

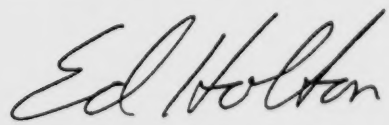
3. **Two page numbers are included.** At the bottom of the page is a combination of symposium number and paper number within the symposium (e.g. 2-1 is the first paper in symposium number two). This format allows you to locate papers easily during the conference. You will find these numbers at the bottom of every page of each paper. At the top of the page are sequential page numbers. These numbers will enable you to cite proceedings papers more easily in the future.

4. **The conference program is your table of contents.**

5. **An Author and Keyword index** is included in the back of the proceedings.

6. **All symposia have papers included.**

Many thanks to all the authors for their cooperation in producing the final papers and tolerating my picky requests. Enjoy the conference and these outstanding papers!



Elwood F. Holton III
Proceedings Editor

Academy of Human Resource Development

Mission

The Academy of Human Resource Development was founded May 7, 1993. The Academy was formed to encourage systematic study of human resource development theories, processes, and practices, to disseminate information about HRD, to encourage the application of HRD research findings, and to provide opportunities for social interaction among individuals with scholarly and professional interests in HRD, from multiple disciplines and from across the globe.

Presidents

1993-4	R. Wayne Pace, Brigham Young University
1994-6	Karen E. Watkins, University of Georgia
1996-8	Richard A. Swanson, University of Minnesota

Outstanding Academic Program Award

1994	University of Minnesota
1995	University of Twente

Outstanding Scholar Award

1994	Fred Otte, Georgia State University
1995	Ronald Jacobs, Ohio State University

Annual Conferences

1993	Chartering Conference
1994	San Antonio
1995	St. Louis
1996	Minneapolis
1997	Atlanta
1998	Chicago
1999	Amsterdam

Room Legend for the 1996 conference

Ball-E	=	Scandinavian Ballroom East
Ball-W	=	Scandinavian Ballroom West
Minn	=	Minnesota Room
Stock	=	Stockholm Room (feel free to use this room for meetings)
Oslo	=	Oslo Board Room
Swe-E	=	New Sweden East
Swe-W	=	New Sweden West
Fest	=	Festival Private Dining Room
Priv	=	Cafe Private Dining Room
Cafe	=	The Cafe (not private)

AHRD 1996 CONFERENCE PROGRAM

Theme: "Performance with Integrity."

THURSDAY

		Room
1:00 - 8:00 pm	**Conference Registration**	
12:00 - 3:00 pm	**AHRD Board of Directors Meeting**	[Oslo]
3:00 - 4:00 pm	**Showcase of the Conference Host Universities**: *Everyone Invited! Refreshments!* HRD Programs at the University of Minnesota & University of St. Thomas *(at UST --see map in your conference packet)*	
4:00 - 4:30 pm	**Reception for All Graduate Students** *(at UST --see map in your conference packet)*	
6:00 - 7:00 pm	**GRAND RECEPTION** and Conference Overview- *(Hors d'hoerves & beverages provided)*	[Ball E&W]
7:00 - 8:00 pm	**HRD TOWN FORUM** Chair: Martin Mulder, University of Twente **Human Resource Development with Integrity** Ronald L. Jacobs, Ohio State University **Performance with Integrity: Thoughts on a Code of Conduct for HRD** Victoria J. Marsick, Columbia University **Open Forum Among Academy Members:** Martin Mulder, Facilitator	[Ball E&W]

FRIDAY

7:10 am	**AHRD Committee Breakfasts** *(Arranged by committee chairs)*	[Cafe]
7:10 am	**"Food-N-Thought" Breakfasts:** *(Pull up a chair at the table in the designated dining area)*	
	Performance & Expertise Interest Group (and 1997 pre-conference planning) Facilitator: Richard Torraco, U. of Nebraska	[Private]
	New Faculty in HRD Network Breakfast Facilitators: Timothy Hatcher, U. of Arkansas & Brenda Gardner, Xavier U.	[Festival]
	Changing Direction of the Profession: Technology Facilitators: William Coscarelli, S. Illinois U. & Catherine Sleezer, Ok. State U.	[Cafe]
8:30 -10:00 am	**KEYNOTE PRESENTATION**.....*HRD with integrity, a view from the top"* **Kenneth Melrose**, Chairman & CEO, The Toro Company ***"A CEO's Journey to Leading by Serving"***	[Ball-E&W]

Ken Melrose is Chairman and CEO of The Toro Company, Minneapolis. Toro is a Fortune 500 company and the leading provider of lawn and turf products. He has a BA from Princeton, M.S. from the Sloan School of Management, and a MBA from the University of Chicago. His 1995 book is titled "Making the Grass Greener on Your Side: A CEO's Journey to Leading by Serving."

Moderator for this Keynote Session: Ed Holton, Louisiana State University

Friday 10:15-11:45 am Symposiums

Room

[1] **HRD & BUSINESS OUTCOMES** Chair: Barbara L. Swanson, Swanson & Associates, Inc. [Ball-W]

The Business Focus of HRD Leaders: A Picture of Current Practice
Keith J. Johansen, University of Wisconsin-Stout
Mitchell E. Kusy, Jr., University of St. Thomas
Robert H. Rouda, University of St. Thomas

How HRD Helps Small Businesses to Maintain A Competitive Edge: A Comparative Case Study
Robert Rowden, Breneau University

Incorporating Continuous Learning Into A Cultural Change Process
Carol Ann Zulauf, Suffolk University
Joseph A. Ilacqua, Bryant College

Legal Issues in HRD
Bonnie S. Turner, University of Texas

[2] **ACTION LEARNING** Chair: Lex Dilworth, Virginia Commonwealth University [Ball-E]

Using Organizational Learning in an Action Research Intervention to Maintain Critical Knowledge/Skills
Deborah Duarte, George Washington University
David Schwandt, George Washington University

Developing an Infrastructure for Individual and Organizational Change
ARL Inquiry

Organizational Learning As Culture Construction
ARL Inquiry

A Study of the Role of Learning Advisors in Action Learning
Judy O'Neil, Columbia University

[3] **EVALUATION ISSUES IN HRD** Chair: Hallie Preskill, University of New Mexico [Swe-W]

Designing an Effective 360-Degree Appraisal Feedback Process
David Antonioni, University of Wisconsin - Madison

A Survey About Training Evaluation Practices in Selected Organizations
William J. Rothwell, Pennsylvania State University

Comparing the Predicted and Actual Results of Cost-Benefit Analysis: Explaining the Discrepancy
Ronald L. Jacobs, Ohio State University
Maria T. Hruby, Ohio State University

[4] **RETHINKING DIVERSITY** Chair: Chair: Neal Chalofsky, George Washington University [Swe-E]

Diversity, A Double Edged Sword
Sally Angus, Colorado State University

Career Development and Stress of Female Faculty Members at Pittsburgh State University
Chin-Fen Tsai, Pittsburgh State University
Robert C. Schwindt, Pittsburgh State University

The Relationship of Training and Team Diversity on the Productivity of Service Technicians
Anthony D. Machado, Bell South Telecommunications
Douglas H. Smith, Florida International University

[5] **HRD IN SELECTED NATIONS** Chair: Alan Mumford, United Kingdom [Minn]

Perspectives of U.S. Expatriates in The Netherlands, Belgium, and France on Expatriation
Jean Rowe McFarland, G.P. Morgan & Associates, Inc.

The Need for an Indigenous Approach to Management Development in Bangladesh
Gary N. McLean, University of Minnesota

The Future of HRD
Jan Streumer, University of Twente
Marcel van der Klink, University of Twente
Katinka van de Brink, University of Twente

12:00 noon **ASTD Research Committee Luncheon Meeting** [Oslo]

12:00 noon **"Food-N-Thought" Luncheons** Room

(Pull up a chair at the table in the designated dining area)

In Action: Conducting Needs Assessments *by J. Phillips and E. Holton* [Cafe]
Facilitators: Judy Hixon, Oklahoma State U. & Ed Holton, Louisiana State University

Practicing Organization Development *by Rothwell, Sullivan, & McLean* [Priv]
Facilitators: Janice Black, Bowling Green State U. & Gary McLean, U. of Minnesota

Changing Direction of the Profession: Restructuring of Colleges, Departments & Programs
Facilitators: Verna Willis, Georgia State U. & Ann Brooks, U. of Texas [Fest]

Friday 1:30-3:00 pm Symposiums

[6] **ORCHESTRATING WORK AND LEARNING** Chair: Susan Lynham, University of Minnesota [Ball-W]

✓**Team Learning: Processes, Interventions and Assessment**
Laurel S. Jeris, Illinois Benedictine College
Sara C. May, Association of Legal Administrators
John C. Redding, Institute for Strategic Learning

✓**The Chief Learning Officer: A Case Study at Millbrook Distribution Services**
Verna J. Willis, Georgia State University
Gary L. May, Millbrook Distribution Services

✓ **Integrating Work and Learning**
Gene L. Roth, Northern Illinois University
Edward (Ted) Raspiller, Southeastern (Iowa) Community College

[7] **HRD MODELS IN EUROPE** Chair: Wim Nijhof, University of Twente [Minn]

✓ HRD Roles in Germany
Linda E. Odenthal, University of Twente
Wim J. Nijhof, University of Twente

✓ **HRD Roles in Finland - Preliminary Results**
Tuija Valkeavaara, University of Jyväskylä

The Purchaser of Training: Towards a New Role?
Wim J. Nijhof, University of Twente
Martin Mulder, University of Twente
Ester van Weele, University of Twente

[8] **HIGH INVOLVEMENT WORK TEAMS** Chair: Michael Leimbach, Wilson Learning Corporation [Ball-E]

✓**Beyond Training to the New Learning Environment: Workers on the High-Involvement Frontline**
Joseph Anthony Ilacqua, Bryant College
Carol Ann Zulauf, Suffolk University

✓**Levels of Desired, Actual, and Perceived Control of Employee Involvement in Decision Making**
William M. Kahnweiler, Georgia State University
Margaret A. Thompson, Georgia State University

✓**The Contribution of Self Managing Work Teams to a Learning Organization**
Jeanette A. B. Huisman, University of Twente
Tanya B. Peppel, University of Twente
Wim J. Nijhof, University of Twente

[9] **INSTRUCTIONAL TECHNOLOGY** Chair: Mark Lewis, Lewis & Associates [Swe-E]

✓**Instructional Technology Competencies Required by HRD Practitioners and Sources of Development**
Julie A. Furst-Bowe, University of Wisconsin-Stout

✓**Electronic Performance Support for Telephone Operators**
Theo J. Bastiaens, University of Twente
Wim J. Nijhof, University of Twente
Harmen J. Abma, University of Twente

✓**CBI Adoption Decision Tools**
David L. Passmore, Pennsylvania State University
Timothy McClernon, CIGNA

Room

[10] **LEARNING RESEARCH** Chair: Keith Johansen, University of Wisconsin-Stout [Swe-W]

A Goal-Based Scenario as a Unified Approach to Integrated Skills Development Training
Kurt J. Olson, Andersen Consulting
Jeffrey M. Bryan, Andersen Consulting

Job Instruction Reconsidered: Usefulness & Limitations of the Dominant Type of Structured OJT
Jan A. de Jong, Utrecht University

Structured On-the-Job Training Competencies
Jong Cheul Yang, The Wyatt Company, Korea Branch
Gary N. McLean, University of Minnesota

A Proposed Model of Approaches to Frontline Employee Development
Christopher Washington, Ohio State University

Friday 3:30-5:00 pm Symposiums

[11] **WORKFORCE ISSUES** **Chair:** Jan de Jong, Utrecht University [Swe-W]

An Exploratory Study of Employee Development in Utilities in Canada and the United States
Michael Aherne, University of Alberta, Edmonton, Canada
David Barron, University of Alberta, Edmonton, Canada

A Study of the Need for Literacy Skills Improvement in a High Technology Company
Rosemarie J. Park, University of Minnesota

Essential Elements of Work: A Factor Analysis of the Occupational Work Ethic
Gregory C. Petty, University of Tennessee-Knoxville
Roger B. Hill, University of Georgia

Towards an Ecology of Soul in Work: Implications for Human Resource Development
John M. Dirkx, University of Nebraska
Terri A. Deems, University of Nebraska

[12] **CAREER DEVELOPMENT** Chair: David Bjorkquist, University of Minnesota [Minn]

A Mentoring Model for Career Development
Mary Finnegan, University of Nebraska

New Employee Development: A Longitudinal Examination of Socialization Processes & Turnover
Elwood F. Holton, III, Louisiana State University
Craig J. Russell, Louisiana State University

Developing the Portfolio Career
Mary Mallon, Sheffield Hallam University, UK

A Longitudinal Study of the Career Development & Aspirations of Women Managers in Business Firms
Rose Mary Wentling, University of Illinois

[13] **CHANGE PROCESS IN ORGANIZATIONS** Chair: John Redding, Institute for Strategic Learning [Swe-E]

Corporate Culture: Friend or Foe of Change?
Joanne C. Burgess, Georgia State University

The Use of Staged Events to Mobilize Change - as Seen from the Participants' Viewpoint
Michael Cope, Henley Management College

Systematic Agreement: A Theory of Organizational Alignment
Steven W. Semler, University of Minnesota

Pennsylvania Telecommunication Infrastructure's Effect on Telecommunications Employment
Holly L. Tucker, Pennsylvania State University

[14] **INSTRUCTIONAL DELIVERY** Chair: Larry Dooley, Texas A & M University [Ball-W]

Distance Education: An Emerging Concept for HRD Programs
Margaret R. Schlais, Oklahoma State University
Carol G. Igo, Oklahoma State University
Catherine M. Sleezer, Oklahoma State University

—continued on the next page—

[14] **INSTRUCTIONAL DELIVERY** *---continued from previous page----* Room

✓**Issues in Using Managers as Instructors: The Qualitative Perspective**
Andrea D. Ellinger, University of Georgia
Karen E. Watkins, University of Georgia
Carol M. Barnas, Ford Design Institute

✓**Training Delivery Problems and Solutions**
Sandra K. Falkman, Hopkins School District
Richard A. Swanson, University of Minnesota

[15] **HRD JOURNALS** Chair: Peter W. J. Schramade, Opleiding & Ontwikkeling (Netherlands) [Ball-E]

✓**Refereed Journals: The Cornerstone of a Developing Profession**
Gary N. McLean, University of Minnesota, Editor, Human Resource Development Quarterly

✓**Improving Performance from Theory to Practice with Rigor and Relevance**
Peter J. Dean, University of Tennessee, Editor, Performance Improvement Quarterly

✓**Introducing The International Journal of Training and Development**
William J. Rothwell, Co-Editor, Pennsylvania State University

Publishing in Adult Education Quarterly
John M. Dirkx, University of Nebraska, Co-Editor
Sean Courtney, University of Nebraska, Co-Editor

6:00 pm HRDQ Editorial Board Meeting & Dinner [Oslo]

6:00 pm AHRD Global 100 Meeting & Dinner [Stock]

SATURDAY

7:10 am **"Food-N-Thought" Breakfasts**
(Pull up a chair at the table in the designated dining area)

Corporate Training for Effective Performance [Fest]
by W. Nijhof, M. Mulder, & R. Brinkerhoff
Facilitators:: Pat Inman, Northern Illinois U., Roger Miller, U. of Minnesota, & Martin Mulder, U. of Twente

The American Mosaic: An Indepth Report on the Future of Diversity at Work [Priv]
by A. Carnalvale & S. Stone
Facilitators: Ed Schroer, Amer. Society for Training & Dev. & Patricia Leitsch, U. of Louisville

Changing Direction of the Profession: Management & Executive Development [Cafe]
Facilitators: Sharon Korth, Xavier U. & Mitch Kusy, U. St. Thomas

8:30 -10:00 am **KEYNOTE PRESENTATION....** *HRD with integrity in the global economy:* [Ball-E&W]

David C. Korten, President, People-Centered Development Forum

"When Corporations Rule the World"

Dr. David Korten has over 35 years of experience in academic, business and international development institutions. He earned his MBA & Ph.D. degrees from Stanford University. He has taught at Harvard and has worked for the Ford Foundation. His People-Centered Development Forum is a global alliance dedicated to the creation of just, inclusive, and sustainable societies. David's new book carries the title of his keynote address.

Moderator for this Keynote Session: Laura Bierema, Washtenaw College

Saturday 10:15 -11:45 am Symposiums — Room

[16] **CORE DIRECTIONS IN HRD** Chair: Verna Willis, Georgia State University [Ball-W]

Reengineering The Organizational HRD Function: Two Case Studies
Neal Chalofsky, George Washington University

Emerging Trends in HRD and OD Based on Organization Assessments
M. Susan Dougherty, Center for Effective Power
Sherrie Ford, Athens Area Technical Institute

The Emergence of a New Paradigm: Spirituality and Work
Elaine Lyford-Nojima, University of Minnesota

Looking through a New Lens: Different Views of Human Resource Development
Darlene F. Russ-Eft, Zenger Miller

[17] **LEARNING ORGANIZATION** Chair: Roger Miller, University of Minnesota [Ball-E]

Creating a Learning Organization: A Case Study of Outcomes and Lessons Learned
Laura L. Bierema, Washtenaw Community College
David M. Berdish, Electrical & Fuel Handling Division, Ford Motor Company

Team Sensemaking: An Imperative for Individual and Organizational Learning
Lisa Horvath, George Washington University
Jamie L. Callahan, George Washington University
Clyde Croswell, George Washington University
Gerri Mukri, George Washington University

The Subject and the Learning Organization
Anders Vind, University of Roskilde, Denmark

[18] **TRANSFER OF TRAINING** Chair: Gene Roth, Northern Illinois University [Swed-E]

Validation of a Transfer Climate Instrument
Reid A. Bates, Louisiana State University
Elwood F. Holton III, Louisiana State University
Dian L. Seyler, Louisiana State University

Transfer of Training in a Corporate Setting: Testing a Model
Esther W.M. Gielen, University of Twente

Integrating Work and Learning for Superior Performance
Joel R. Montgomery, Andersen Consulting LLP
Chak C. Lau, Andersen Consulting LLP

[19] **CROSS-CULTURAL HRD** Chair: Connie Fletcher, Loyola University [Minn]

Intercultural Adjustment of U.S. Expatriates in the People's Republic of China
Hallett G. Hullinger, Oral Roberts University
Robert E. Nolan, Oklahoma State University

Cross-Cultural Training– Review of Literature and an Action Learning Approach
Nienyu Keng, University of Texas

Filters of a Family Kind: How They Impact Global HRD– and Why West Doesn't Always Meet East
Verna J. Willis, Georgia State University
Robert L. Dilworth, Virginia Commonwealth University

[20] **CONTEXTUAL LEARNING ISSUES** Chair: John Henschke, University of Missouri [Swe-W]

Self-directed Learning in Organizations: Analysis of Policies and Practices of Companies in Canada
H. K. Morris Baskett, University of Calgary

Designing the Learning Potential of Jobs
Jeroen Onstenk, University of Amsterdam

Neighbor-Teaching-Neighbor: A Case Study of the Reciprocal Relationship Between Work & the Worker
Diane B. Stoy, University of St. Thomas

An Action Learning/Critical Thinking Approach to Program Development & Evaluation
Susan Damme, University of Minnesota
Rod Hamer, University of Minnesota

Room

12:00 noon **"Food-N-Thought" Luncheons** *(Pull up a chair at the table in the designated dining area)*

Performance Engineering at Work *by P. Dean (editor)*
Facilitators: Bede Anyanwu, Oklahoma State U. & Peter Dean, U. of Tennessee [Fest]

Evaluation in Changing Organizations [Priv]
Facilitators: Hallie Preskill, U. of New Mexico, Ed Holton, Louisiana State U., Catherine Sleezer, Oklahoma State U., Darlene Russ-Eft, Zenger-Miller, Lilanthi Ravishankar, Zenger-Miller.

How to Form an AHRD Regional Chapter [Cafe]
Facilitators: Bill Kahnweiler, N. America, Martin Mulder, Europe & Rod McDaniels, Austraila

Saturday 1:30-3:00 pm Symposiums

[21] **EXPERTISE IN ORGANIZATIONS** Chair: Ross Azevedo, University of Minnesota [Ball-W]

How Individual Expertise May be Socially Constructed: A Literature Review
Abney V. Gleespen, Ohio State University

Experts and Expertise: The Status of the Research Literature on Superior Performance
K. Peter Kuchinke, University of Minnesota

Job Performance Goals: Bridging the Gap from Theory to Practice
Richard J. Torraco, University of Nebraska

[22] **CAREER DEVELOPMENT/SPECIAL NEEDS** Chair: James M. Brown, University of Minnesota [Swe-E]

Differential Rates of Employer Sponsored Job Training by Demographic Characteristics
Marilynn N. Butler, Pennsylvania State University

Nonparticipation in Adult Ed. Programs from the Perspectives of Low-literate Blue-collar Male Workers
Deryl Davis-Harrison, Milwaukee Area Technical College

Transformative Learning Principles to Improve Training Programs for the Economically Disadvantaged
Germain D. Ludwig, Palm Beach Atlantic College

Supporting the Career Development of Older Employees: An HRD Point of View
Bertien Rhebergen, University of Twente
Ida (A.A.M.) Wognum, University of Twente

[23] **PRACTITIONER STATES** Chair: Kay Bull, Oklahoma State University [Swe-W]

Effect of Locus of Control and Performance-Contingent Incentives on Productivity and Job Satisfaction in Self-managing Teams
Bonnie E. Garson, Southern College of Technology
Douglas Stanwyck, Georgia State University

Creating Healthy Workplaces: A Model for Developing Corporate Wellness Programs
Michele A. Hamil, Northern Illinois University

Inside the Heads of HRD Practitioners: How Do They Plan?
Sharon J. Korth, Xavier University

Instructional Thoughts of HRD Practitioners
Theodore Lewis, University of Minnesota

[24] **STRUCTURED & UNSTRUCTURED LEARNING** Chair: Catherine Sleezer, Oklahoma State U. [Ball-E]

Designing Experiential Learning Into Organizational Work Life: Framework for Theory & Research
Cheri Maben-Crouch, Buena Vista University

A Case Study of the Development & Implementation of a Structured On-The-Job Training Program
Janice A. Black, Bowling Green State University
Frank J. Zenner, Jr., Midway Products
Ernest Ezell, Bowling Green State University

Structured On-The-Job Training: Pre-design Analysis Activities
Marcel R. van der Klink, University of Twente

A Case Study of Informal Learning in the Workplace
Margaret C. Lohman, University of Iowa
Pei-ru Wang, University of Iowa
Nicholas H. Woolf, University of Iowa

Saturday 3:30-5:00 pm Symposiums — Room

[25] **LEADERSHIP AND MANAGEMENT DEVELOPMENT** Chair: Mark Porter, National-Louis U. [Ball-E]

Expanding Formative Experiences: A Critical Dimension of Leadership Deportment
Gary D. Geroy, Colorado State University
Jackie L. Jankovich, Colorado State University

Mentoring and Reflection: Enhancing Managerial Skills
Susan R. Meyer, Training by Design

African-American Women's Corporate Leadership Experiences: Contextual Implications for HRD
Valeria J. Stokes, Sears University

New Management Roles in the Communications Industry
Kemp van Ginkel, University of Twente
Wim J. Nijhof, University of Twente
Jan N. Streumer, University of Twente

[26] **DIVERSITY IN THE WORKPLACE** Chair: Sandra Johnson, Personnel Decisions, Inc. [Minn]

An Assessment of Equal Opportunities and the Role of HRD in the Police Service
Rashmi Biswas, Sheffield Hallam University
Penny Dick, University of Teesside

Leadership Development in Multiracial Organizations
Larry G. Martin, University of Wisconsin-Milwaukee

HRD Initiatives Contributing to Women's Career Progress
Kimberly S. McDonald, Indiana-Purdue University Fort Wayne
Linda M. Hite, Indiana-Purdue University Fort Wayne

[27] **UNIVERSITY INSTRUCTION IN HRD** Chair: Janice Black, Bowling Green State University [Swed-E]

Facilitating Transfer of Learning from the Classroom to the Workplace
Brenda S. Gardner, Xavier University
Sharon J. Korth, Xavier University

Team Teaching HRD as a Mentoring Tool
Timothy G. Hatcher, University of Arkansas
Barbara E. Hinton, University of Arkansas

Effective Practice in the Video-teleconferencing Distance Education HRD Classroom
John A. Niemi, Northern Illinois University
Kevin Owens, Northern Illinois University

[28] **PERFORMANCE IMPROVEMENT** Chair: Edward Schorer, ASTD [Swe-W]

The Organizational Ecology of Ethical Problems: International Case Studies in the Light of HPT
Peter J. Dean, University of Tennessee
Laurence Barton, Motorola, Inc.

Assessing Performance in HRD Practices: A Look at Latham and Saari's Situational Interview
Sandra M. Kaiser, Louisiana State University

Customer Satisfaction and Training Program Quality
Martin Mulder, University of Twente

DACUM, Training, and ISO 9000
Robert E. Norton, Ohio State University

[29] **PARTNERSHIP RESEARCH** Chair: Richard Torraco, University of Nebraska [Ball-W]

Partnership Research in HRD: Pulling Rabbits from Hats
Ronald L. Jacobs, Ohio State University

Partnership Research: Challenges and Opportunities
Laurie J. Bassi, ASTD

University-Industry Partnerships: Meeting the Challenge With a High Tech Partner
Lynn E. Nimtz, Southern Illinois University
William C. Coscarelli, Southern Illinois University
Daniel Blair, Hewlett-Packard Company

SUNDAY

Room

7:10 am **AHRD Board of Directors Breakfast** *(Agenda: 1997 Conference, Newsletter, & Directory)* [Priv]

Sunday 7:10 am **"Food-N-Thought" Breakfasts**
(Pull up a chair at the table in the designated dining area)

HRD Values and Integrity in HRD (and 1997 pre-conference session planning) [Fest]
Facilitator: Neil Chalofsky, George Washington U.

HRD Graduate Student Network Breakfast [Cafe]
Facilitators: Maria Cseh & Andrea Ellinger, U. of Georgia

Information Meeting for those Considering Hosting an AHRD Conference
Facilitator: Gene Audette, St. Thomas University [Cafe]

Sunday 8:30-10:00 am Symposiums

[30] **EVALUATION SYSTEMS IN HRD** Chair: Jerry Gilley, Western Michigan University [Ball-W]

PLS Evaluation System: Sales Communication Case Study
Richard A. Swanson, University of Minnesota
Timothy R. McClernon, CIGNA

Assessing Organization, Team, and Individual Learning: The Strategic Learning Assessment Process
John C. Redding, Northern Illinois University

Realities of Communicating & Reporting Practices & Outcomes for Internal and External Evaluators
Rosalie T. Torres, Torres Consulting Group
Hallie Preskill, University of New Mexico
Mary E. Piontek, RMC Research Corp.

[31] **TEAM BUILDING** Chair: Allen Church, W.W. Burke Associates, Inc. [Ball-E]

Teambuilding Intervention Strategy Deployment: A Case Study of Two Mfg. Industries
Paul E. Brauchle, Illinois State University
David W. Wright, Illinois State University

Installing, Training, and Rewarding Teams with "Pay for Knowledge": A Case Study
Paul Hardt, Employers Association, Inc.
Johan Häggström, Tetra-Rex Packaging Systems, Inc.

Perceptions of Self-directed Work Team Members: The Big Picture
Toni Powell, Barry University

Employee Perceptions of Employee and Organizational Values in a State Department of Corrections
Jennifer Gail Parsons, Oklahoma State University
William R. Venable, Oklahoma State University
Michael Dee Parsons, Arcadia, Oklahoma

[32] **TRAINING PRACTICES** Chair: Valeria Stokes, Sears Company [Swed-E]

Management Development Simulations: Effective or Not?
Jill R. Hough, Alternative Environments

Job Analysis Validity & Workability
Reva Hutchins, Ohio State University
James E. Sage, Ohio State University

A Survey About Training Needs Assessment Practices in Selected Organizations: Summary of Results
William J. Rothwell, Pennsylvania State University

Strategic Quality Training: A Comprehensive Training Process To Ensure Transfer of Learning
Sandra L. Hastings, Barbara Palmer, Rosellen East, Janice Schuyler, Deanna Green, John Dyer, and Carol Bilotti, Connecticut Department of Labor

Room

[33] **HRD ACADEMIC PROGRAMS** Chair: Gene Audette, University of St. Thomas [Swe-W]

Revisiting Perceptions of HRD Roles: Implications for HRD Curricula
Danilo M. Baylen, Northern Illinois University
Margaret L. Bailey, Northern Illinois University
Mary Samardzija, Northern Illinois University

Establishing a Research Base for Professional Development
Robert E. Norton, Ohio State University
Reva Hutchins, Ohio State University

Profile of the HRD and AE Professoriate and Perceived Dynamics Framing Program Integration
Shari L. Peterson, University of Minnesota
Joanne Provo, University of Minnesota

[34] **STATUS OF HRD RESEARCH** Chair: Barry Johansen, Medtronic, Inc. [Minn]

An Exploration of the Type of Research Appearing in the AHRD Conference
David E. Arnold, University of Minnesota

Identifying Core Journals for HRD Research: Process and Results
Catherine M. Sleezer, Oklahoma State University
James H. Sleezer, Oklahoma State University
R. Wayne Pace, Southern Cross University

HRD Research and Trade Union Cooperation
Anders Vind, University of Roskilde, Denmark

Theoretical, Conceptual and Methodological Issues Surrounding a Large Scale Change Effort
Karen E. Watkins, Tom Valentine, Andrea Ellinger, and Maria Cseh, University of Georgia
Lewis J. Bellinger, Carol Barnas, and Don Blum, The Ford Design Institute, Ford Motor Company

10:15-11:45 am **KEYNOTE PRESENTATION** [Ball E&W]
Moderator for the Keynote session: Wim J. Nijhof, University of Twente

HRD Integrity through Business-Research Partnerships

Timothy McClernon, CIGNA Company

Tim McClernon, VP of Sales and Performance Consulting, is a Charter member of the AHRD Global 100 and has recently published in the HRDQ. Tim received his Ph.D. from the University of Minnesota in HRD and worked for United HealthCare prior to joining CIGNA. He is committed to partnering and will discuss his "participant satisfaction-to-business performance" journey.

Lewis Bellinger, Ford Motor Company

Lewis Bellinger is Manager of Technical Education Planning and Development for Ford Design Institute. His Ph.D. is in Instructional Technology, and he is a Charter Member of the AHRD Global 100. Lewis has extensive experience in engineering and manufacturing operations and serves as adjunct professor at LawrenceTechnological University.

12:00 -1:00 pm **AHRD ANNUAL BUSINESS MEETING** *(All Academy members please attend.)* [Ball-E]

1:00 pm Hotel Checkout & Lunch

1:00 - 2:00pm **AHRD Board of Directors Meeting** *(Agenda: Membership, Global 100, HRDQ)* [Oslo]
[Continuing & new board members please attend-- box lunch will be served]

APPRECIATION

Dear Academy Members,

A special thank you to the following volunteers for their contributions to the 1996 AHRD Conference! It is my sincere hope that the list is complete. If you know any of these fine professionals, please extend your gratitude for their work.

Best Regards,

Richard A. Swanson
Chair, 1996 AHRD Conference

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Academy of Human Resource Development

CALL FOR PAPERS
for the
1997 ANNUAL CONFERENCE

March 6 - March 9, 1997
Atlanta, Georgia

The AHRD, an international organization having the purpose of encouraging the systematic study of human resource development theories, processes, and practices, encourages you to submit proposals for the 1997 Annual Conference.

All scholars interested in HRD are invited to submit proposals for consideration. The conference is attended by university professors and graduate students from the areas of HRD, business, psychology, education, economics, sociology, technology, and communication. In addition, HRD researchers and reflective practitioners from business, industry, and governments participate fully in the conference.

All submissions should be typed, double spaced, and contain full identification of all persons submitting the proposal (name, title, organization, mailing address, telephone, and fax. All submissions should be of new, unpublished research. Manuscripts accepted for the conference program and published in the proceedings may be published elsewhere following the conference. Please submit four (4) copies of each proposal submission. There is a October 1, 1996 deadline for proposals. (Full and final manuscripts of accepted proposals-- to be included in the conference proceedings-- must be received no later than January 6, 1997. Manuscripts not received by the deadline will be withdrawn from the conference program). Dr. Richard J. Torraco, University of Nebraska, is editor of the 1997 AHRD Conference Proceedings (402-472-3853, Fax 402-472-5907).

Paper Proposals can be full manuscripts or in an abbreviated 3-5 page form. They should minimally contain the following elements:

- Title
- Problem statement and theoretical framework
- Research questions and/or hypotheses
- Methodology
- Results and conclusions

Please submit proposals to:

AHRD Conference Committee
P.O. Box 9589
Austin, Texas 78766
USA Fax 512-371-7449 Phone 512-323-2736

Conference Notes:

- *The 1997 conference will be held in a downtown Atlanta hotel. Georgia State University and the University of Georgia and will serve as the conference hosts.*
- *The 1998 conference will be held in Chicago (USA) from March 5-8*
- *The 1999 AHRD Conference will be held in Amsterdam (The Netherlands) from March 4-7*

Human Resource Development with Integrity

Ronald L. Jacobs
The Ohio State University

The conference theme of "Human Resource Development with Integrity" is both reassuring and challenging. It reassures us that the need to address issues related to professional ethics and values have not gone unnoticed. Doing research and practice in organizations is a difficult task. It challenges us in that integrity remains an abstract notion for many, ensuring that most people will use the term to suit their own needs. Two meanings of integrity as applied to HRD are discussed in this paper.

The theme of this conference is "Human Resource Development with Integrity." That integrity should be selected for the conference theme should not be surprising. So much discussion today involves this professional trait. We hear journalists say their integrity depends in part on reporting in an objective manner. Maintaining the sanctity of what is said between counselors and clients defines integrity for mental health professionals. The new breed of politicians warn voters that, if elected, they will do exactly what they promise. It seems counterintuitive to say that politicians should base their integrity on them actually keeping their promises. I have counted at least a dozen businesses in the Central Ohio area which use integrity in their names, from "Integrity Plumbing & Heating" to "Integrity Typing Services." The world, it seems, depends more and more on claims of integrity.

Integrity is now to be considered in regards to the field of human resource development. At first glance, such a discussion would seem relatively easy to carry out. Few would dispute that, along with professional ethics and values, integrity should be a part of HRD. Could anyone offer a credible argument to the contrary? Yet, after we have agreed on the importance of integrity, the following questions remain essentially unanswered: What is integrity? How does it differ from ethics and values? What role does it play in the work of HRD researchers and practitioners? This paper defines integrity in general and then discusses its two major meanings related to the HRD field. The paper concludes by discussing the challenges of pursuing the goal of integrity. Perhaps there are times when integrity and compassion need to be balanced. The major point here is that HRD with integrity, while an desirable professional ideal to pursue, remains a daunting personal challenge.

Definition of Integrity

From most standard dictionary accounts, integrity seems to have two major meanings. First, integrity denotes consistency in the way individuals carry out their beliefs. Second, integrity denotes the relative completeness of an object, thing, or process.

To say that a person has integrity suggests that he or she has considered the meaning of beliefs such as ethics and values, and then reacts to life situations, often under trying circumstances, in ways that are congruent with them. In this sense, integrity is not the same as, say, ethics, though the two concepts are obviously related. Ethics are the agreed upon set of rules that guide behavior, based on which principles to consider foremost (Flynn, 1995; Ferrell & Fraedrich, 1991). Ethics are necessarily prescriptive in nature. Ethics help us distinguish between right or wrong and good or evil. Integrity makes whatever ethical system adopted meaningful to the individual and a reality to others. Integrity presents the opportunity and the challenge to carry out the ethical beliefs.

The modern world continually challenges our ethics and, by extension, our integrity. Yet, while integrity can be associated with undesirable ethics, I believe this defeats the purpose of the

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intended meaning of the term. Simply stated, integrity without a sound ethical system has no social value. Morality and values play a fundamental role in determining how to conceptualize ethical behavior and, thus, how to possess integrity. Unfortunately, ethics, morality, and values all are relatively fluid constructs. Answers that we may believe are appropriate today are unlikely to remain so in the future. For instance, the Hippocractic Oath calls for physicians to pledge to do no harm. Yet, Hippocrates lived in a far simpler time, long before costly medical technology, co-payments, fee caps, and insurance deductibles were known to exist. Yet, the need for integrity to carry out our beliefs, whatever they may be, remains constant.

Instead of a personal trait, the second way of defining integrity denotes the particular status of some idea, object, or process. In this sense, integrity means that the idea, object, or process is judged to be complete, unimpaired, and whole in its most important respects. To say that something has integrity suggests that a judgment has been made, based on comparing it with a standard or referent. Integrity is said to exist when the instance is complete and not lacking in any major way.

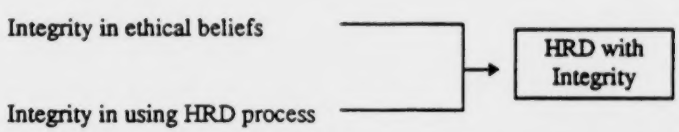
Many ideas, objects, or processes can be referred to as having integrity. For example, a research proposal can be said to have integrity when all critical aspects have been included, based on a list of considerations that make sense for all research proposals. Likewise, a boat is said to have integrity, when the wooden planks are attached to the extent that the hull does not leak. In each instance, the judgment is based on making a comparison, recognizing that the model or referent used to compare the example may differ across individuals. Would all sailors agree that even if a boat leaks some water, but not enough to endanger its occupants, then should it still be considered to have integrity?

HRD With Integrity

The conference theme of "HRD with Integrity" should reassure us that such topics are recognized as being important to the field. HRD is seldom as straightforward as some of our theories and practices might otherwise suggest. In truth, HRD exists within the untidy social context of differing individual motivations and perceptions of reality. Many issues in organizations can be right or wrong at the same time, depending on the person's point of view. Such a realization provides a necessary, if not humbling, background for this discussion on integrity. To say HRD with integrity, seems to mean that integrity exists alongside of, or in association with, HRD. Integrity is independent from HRD. But, integrity is something that should be considered along with whatever HRD activity is being done. Thus, the conference theme suggests that integrity is both independent from and, at the same time, a necessarily part of HRD.

I submit that HRD with integrity has two interrelated meanings: 1) Integrity in carrying out ethical HRD professional beliefs, and 2) Integrity in using the HRD process. As shown in Figure 1, together these two meanings form a comprehensive view of this concept.

Figure 1. Components of HRD with Integrity



Integrity in Ethical Beliefs. The first meaning of HRD with integrity refers to the consistency in which beliefs are adhered to, based on a set of professional ethics and values. This statement assumes that a set of professional beliefs exist in the first place. In 1988, Odin Westgaarde presented a "Credo of Performance Technologists," which included the following points that professionals should not do:

- Violate professional, academic, or business ethics by being less than honest in billing or by submitting low proposal bids and higher final bills;
- Promise solutions will work when the opposite may be true;
- Make false return on investment claims;
- Use client information for personal gain;
- Falsify data;
- Compromise the technology for any personal or political gain by providing interventions that are acceptable to the client but incorrect for the context;
- Take credit for the work of another; and,
- Make false claims about any professional's behavior or potential accomplishments.

Based on this information, Figure 2 presents a worksheet that connects sample dimensions of HRD research with professional ethics and key integrity situations. The dimensions identify some of the activities that may occur during HRD research, which are subject to ethical consideration. The ethical rule is presented next to the dimension, based on what the individual (in this case, me) believes to be the right or wrong thing to do. Finally, the key integrity situations are examples from experience that test the ethical rule. The key integrity situations present the occasion for using the rules. While the worksheet may seem overly simple it does address a major question related to HRD with integrity. How can professionals make HRD with integrity a more generative goal? HRD with integrity becomes a matter of recognizing instances that we encounter in our work, and then responding to them consistent with our beliefs.

Figure 2. Integrity in Ethical Beliefs Worksheet

	Ethical Rule	*Key Integrity Situations*
HRD Dimension		
A. Confidentiality of individual's responses	Individual's responses must never be revealed to the organization, unless permission has been granted to do so.	* Manager asks to see printout with names. * Manager asks about certain people.
B. Purpose of the research study	Purpose of research and use of data must be represented accurately.	* Researcher explains study to managers and employees, separately.
C. Publication of the results in journals	Publication of research results must be negotiated with client, even if name of organization is kept confidential.	* Client does not seem to want to be involved. * Organization name omitted -- what's the difference?
D. Ownership of the of data after study	Use of the data after the study must be negotiated with client.	* Graduate student asks to practice on data set for statistics class.

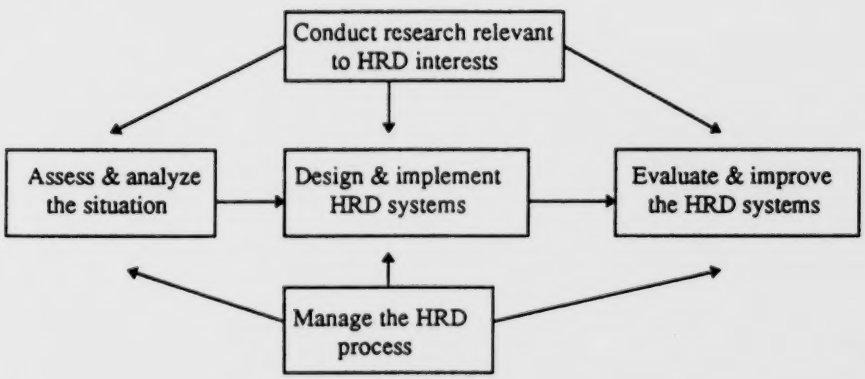
Completing the worksheet is a personal task and, thus, the information on it will likely differ for each of us. There may be disagreement on the dimensions of importance, perhaps the ethical beliefs about them, and the situations that give us opportunities to demonstrate integrity.

However, I suspect there is much agreement in terms of the HRD research dimensions than, say, the HRD practice dimensions.

Integrity in Using HRD Process. The second meaning of HRD with integrity is the completeness in using the HRD process. As presented in Figure 2, the HRD process is composed of the major phases of the systems approach, and the respective sub-processes within the phases (Jacobs, 1990). For instance, within the phase of "Assess and analyze the situation" are the sub-processes of strategic planning, needs assessment, performance analysis, work analysis, and so on. HRD with integrity is a judgment about the adequacy of our professional actions based on comparing what is actually done and what is called for in the HRD process. This meaning of integrity is relatively objective, since one can readily observe or reconstruct actual events to make the comparison and, thus, make a judgment.

The various HRD competency studies contribute much to this meaning of HRD with integrity. That is, the studies have identified the competencies required for the various HRD roles derived from the HRD process. Thus, if one possesses specific HRD competencies, then the person has the capability to carry out the HRD process which, in turn, is a measure of doing HRD with integrity .

Figure 3. Integrity in Using HRD Process


Conduct research relevant to HRD interests
Assess & analyze the situation
Design & implement HRD systems
Evaluate & improve the HRD systems
Manage the HRD process

This meaning of integrity relates to my own dual role as full-time HRD professor and part-time HRD practitioner. Integrity means that there should be consistency in what I believe is important for others to learn and what I do in my own practice. Integrity demands that theory and practice should be reconciled with each other. For instance, many of my graduate classes are infused with systems theory principles based on my writings on that topic (Jacobs, 1989). If I am to be a credible source of information, then I would certainly hope that my own practice in organizations clearly follows from this emphasis. If the performance analysis course requires students to analyze the organization, workflow, and job levels, then clearly I should be expected to do the same in my own work. Otherwise, whatever knowledge and skills I bring to students in the classroom would be diminished by my lack of integrity in using the HRD process.

Conclusion

Throughout this discussion integrity has been portrayed as a desirable HRD trait. Can we ever expect to achieve integrity? Probably not, since for most of us, achieving integrity remains an in-process goal. The challenges in doing HRD with integrity are no different from the challenges in being a good person. Sometimes we may succeed and sometimes, often in spite of our best intentions, we fail and result in disappointing ourselves and others. How to learn from

our experiences, without causing much damage along the way seems critical. Mark Twain said, "Good judgment comes from experience. And where does experience come from? Experience comes from bad judgment." It may follow that doing HRD with integrity means that we must experience the consequences of doing HRD without integrity first? Unfortunately, we learn by doing in an unstructured way.

Finally, in preparing this paper, I was struck by the notion that while we view integrity as desirable could too much integrity be undesirable? Consider that integrity to the extreme may lead to a loss of compassion for our human needs. Certainly to be compassionate requires some degree of flexibility, which by definition is the antithesis of integrity. Compassion says it is sometimes appropriate to relent on certain points because the psychological needs of others take precedence. I learned early in life that many rules are made to be broken. Fortunately, most of us are still struggling with the initial challenges of doing HRD with integrity. After all, who among us is truly able to maintain a workable system of personal ethics and possess the necessary competencies to engage in effective HRD research and practice? That combination seemingly represents an almost unattainable goal. Nevertheless, the challenge is to continue to pursue the goal of doing HRD with integrity.

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Performance with Integrity: Thoughts on a Code of Conduct for HRD that Reflects Adult Development Theory

Victoria J. Marsick
Teachers College, Columbia University

Discussions with HRD practitioners suggest that a professional code of conduct would help them in making decisions about integrity. But how should such a code of conduct be crafted? HRD's unique focus on people suggests that a code of conduct be influenced by what we know about human development. Adult development theory helps to generate insights into a professional code of conduct that speaks to integrity.

The coupling of "performance" with "integrity" as a theme of this conference implies, in some way, that the two concepts are congruent, or at least, they might be so. In what ways do HRD practitioners experience dilemmas in exercising their roles that might call into question their integrity? To write this paper, I asked this question of several practitioners. Although there are dramatic examples of lack of integrity in the field, these practitioners spoke more often to subtle challenges that show up in daily incidents. As I reflected on their answers, I could see that decisions about what constitutes integrity are often complex. As several practitioners pointed out, the profession itself does not offer any guidance to practitioners in making these judgments. I concluded that a professional code of conduct would be helpful. This led me to think about how such a code could be constructed. Everyone can agree to criteria that speak to "large" legal issues. Most professional codes of conduct provide absolute rules for making decisions that speak to such issues. However, HRD practitioners much more routinely face more subtle challenges tied to smaller daily decisions. These decisions are especially complex because HRD is centrally concerned with people's development. I concluded that a code of conduct for HRD should reflect this concern. I then turned to adult development theory for insights into how such a code should be constructed. These development theories offer a research-based perspective on the ways in which people at different developmental levels—both HRD practitioners and their clients—might make meaning of integrity, and therefore, on how a code of conduct might best be constructed.

In this paper, then, I first define integrity and raise several questions relevant to the difficulties people experience in understanding what integrity means. A professional code of conduct could help HRD practitioners by providing criteria for these judgments. I next turn to adult development theory—specifically frameworks developed by Kegan (1994) and Torbert (1991)—for help in understanding how people might think about the meaning of integrity. I develop criteria for integrity based on these theories, and use these criteria to analyze a range of challenges to integrity that were identified by HRD practitioners for this paper. I conclude with implications for developing a professional code of conduct.[1]

Definitions of Integrity

What does the dictionary say about the meaning of integrity? Random House (Flexner and Hauck, 1993, p 990) defines it as follows: "1. adherence to moral and ethical principles, soundness of moral character, honest. 2. the state of being whole, entire, or undiminished . . . 3. a sound, unimpaired, or perfect condition." The dictionary definition suggests three possible ways in which individuals, and the organizations in which they work, might define integrity:

1. Adherence to a code of conduct suggests congruence between external actions and internal espoused views about actions, either within individuals or within the organization.
2. Wholeness or organic unity suggests integration, that is, unity among the various components of beliefs for individuals or within the system.
3. A condition of soundness and/or perfection emphasizes the quality of wholeness articulated in a code of conduct, as articulated in either of the above definitions.

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Reflection on these definitions raises three questions about how people make meaning of integrity—their own, and that of others. First, do people have to pay conscious attention to a code of conduct in order to follow one? Second, how difficult is it to identify a code of conduct that another holds? Third, in what ways do societal beliefs influence the codes of conduct that individuals or organizations follow?

Regarding the first point, on the surface, it seems that people must have some conscious awareness about a code of conduct in order to follow one. How else can they rigorously assess the wholeness or idealness of conduct—their own, that of others, or that of the organization as a system.? Deeper consideration, however, leads to the realization that people can follow a code of conduct that they have uncritically adopted based on their admiration for influential others, or on what they were told about "right" and "wrong." Opinions about integrity are often acquired with little conscious thought through socialization in family units, peer groups, and other institutions (schools, religion, the workplace). People are unlikely to examine their codes of conduct unless they get feedback from others or from the environment that signals a conflict. Even if they feel uncomfortable with their actions or what is expected of them, they might not look further at what this discomfort implies.

As to the second question, there are difficulties in identifying the code of conduct to which others adhere. People evaluate others' actions based on their own values and beliefs, and may characterize those actions as lacking in integrity when those others do not conform to their own code of conduct. It is not always practical, when dealing with a workplace problem, to stop and ask how others might view integrity in that situation. Generally, people make judgments based on their own past experience and their perceptions of the other person, assume their judgments are correct, and act on these beliefs. The difficulties in not testing these assumptions are many. Error can simply arise because one's grasp of facts is incorrect.

The third question speaks to the way in which individuals and organizations construct their beliefs in interaction with societal judgments about integrity. Decisions about integrity made by one person affect others with whom one is bound in social and organizational life. The social construction of codes of conduct is made even more difficult today because the fabric of society is shifting in fundamental ways. Social codes need to be renegotiated in this new order. While real gains in democratic participation and pluralistic life have also introduced divergent opinions about what "ought to be," people are not necessarily skilled in surfacing, addressing, and reconciling these differences in views. Renegotiating social codes involves questioning basic assumptions, which may well lead to political struggles, for example, over issues such as the distribution and use of resources or power.

Implications for a Code of Conduct Answers to questions such as those posed above make it clear that judgments about integrity are complex: 1) People often follow codes of conduct that they have not consciously crafted or examined; 2) deciding what constitutes another person's code of conduct is difficult; and 3) a person may make arguments that could hold up under one person's test of integrity, but fall apart under another's. Some organizations have developed explicit codes of conduct, perhaps because of these difficulties. The profession of Human Resource Development does not have such a code. In its absence, professionals are left to make their own judgments about what constitutes integrity. I conclude that we ought to craft such a code. Moreover, I believe that the code should reflect the fact that HRD is centrally concerned with people, and hence, should do more than offer legal protection to adherents. Such a code should reflect what we know about human development. I thus turned to adult development theory for insight into the different ways in which people perceive their worlds, and consequently, the way in which they might differently define integrity. Finally, I develop criteria for making judgments about integrity based on these theories, and use these criteria to examine several dilemmas of integrity experienced by HRD practitioners.

Integrity as Viewed through the Lens of Adult Development Theory

There is no uniform theory of adult development. Here, I use work by Kegan (1994) and Torbert (1991) to look at the way in which adults might define and interpret integrity differently based on their level of development. I further focus only on those levels which their research suggests are likely to be relevant in today's workplace. Kegan, who bases his work on Piaget, argues that adults function primarily at what he calls a Stage Three or Stage Four Order of Consciousness.

Kegan describes Stage Three as Interpersonal Consciousness, which is characterized by mutual reciprocity, and is oriented to an internal, subjective state of self consciousness. Stage Four, described as Institutional Consciousness, is characterized by relationship-regulating forms, and is oriented to self authorship, autonomy, systems thinking, and individuation. Kegan illustrates the difference between Stage Three and Stage Four by contrasting attitudes at either level with respect to management challenges today. See Table 1. Kegan suggests that their way of making meaning at each of these stages is fundamental to understanding people: "Since what is most important for us to know in understanding another is not the other's experience but what the experience means to him or her, our first goal is to grasp the essence of how the other composes his or her private reality" (Kegan, 1982, p. 113).

Table 1: Kegan's Contrast between Stage Three and Stage Four Work-Related Attitudes

Stage Three Work-Related Attitudes	*Stage Four Work-Related Attitudes*
To "See" work "as owned and created by the employer"	*"To invent our own work"*
To be "dependent on others to frame the problems, initiate adjustments, or determine whether things are going acceptably well"	*"To be self-initiating, self-correcting, self-evaluating"*
To "be without a vision or be captive of the authority's agenda"	*"To be guided by our own visions at work"*
To "see our present internal circumstances and future external possibilities as caused by someone else"	*"To take responsibility for what happens to us at work externally and internally"*
To "have an apprenticing or imitating relationship to what we do"	*"To be accomplished masters of our particular work roles, jobs, or career"*
To "see the rest of the organization and its parts only from the perspective of our own part, from the 'inside out'"	*"To conceive of the organization from the 'outside in,' as a whole; to see our relation to the whole; to see the relation of the parts to the whole"*

Adapted from R. Kegan, In Over Our Heads, Cambridge: Harvard University Press, 1994: 152-153 [italics added by Kegan].

Torbert (1991) derives a research-based understanding of the way in which managers think using the developmental framework of Loevinger (1976). See Table 2. Most managers place at one of three stages—which Torbert calls Diplomat, Technician, Achiever—and a few at a fourth stage, which he labels Strategist. Studies conducted by Torbert and his colleagues show that the behavior of 91% of their sample can be accounted for by one of these four stages. As is so for Kegan, Torbert notes that "Each succeeding construction 'dethrones' the assumptions of the previous construction and transforms them from their role of framing and governing reality to a new role as variables within a wider reality" (p. 42).

Table 2: Distribution of Managers by Stage in Studies Conducted by Torbert and Colleagues

Stage	Governing Frame	Percentage of Managers at Stage in Six Studies[2]
Diplomat	"Expectations rule interests"	8% of total
Technician	"Internal craft logic rules expectations"	45% of total
Achiever	"System success in environment rules craft logics"	36% of total
Strategist	"Principle rules system"	9% of total

Adapted from W. R. Torbert, The Power of Balance, Newbury Park, Ca: Sage, 1991: 43.

Developmental Criteria for Integrity Developmental theory raises questions about what integrity might mean to HRD practitioners. In Table 3, I suggest criteria for integrity at each of the developmental levels identified by Torbert. Torbert's four stages are related to Kegan's Third and Fourth Order of Consciousness (Harris, in progress). I use Torbert's definitions because he has provided more detail and clearer distinctions for each of his four stages.

Table 3: Suggested Criteria for Defining Integrity Based on W. R. Torbert

Torbert's Levels	Criteria for Integrity
Diplomat	What is most likely to obtain the approval of highly influential others
Technician	What is rational, logically consistent with craft rules, and efficient
Achiever	What is most effective for the system as a whole
Strategist	What is situationally appropriate, given the paradox and contradiction of life, and aligned with one's principles

The Diplomat takes sides with the person who, for whatever reasons, is perceived to be the most influential at the time "irrespective of the internal logic of those attractions, preferences, or viewpoints" (Torbert, 1991, p. 44). The meaning of integrity for the Diplomat can thus shift over time and, regarding the dictionary definition discussed above, does not necessarily represent wholeness or consistency of viewpoint.

In the face of conflicting viewpoints, the Technician "can develop a deep yearning (not necessarily ever expressed) to move from simply internalizing this conflict toward an internally consistent viewpoint that prioritizes actual claims" (Ibid, p. 45). The Technician is drawn to the intrinsic logic of her craft, to excellence, and to technical superiority. However, her code of conduct—though pinned to technical excellence—would still remain external to herself, in the hands of the expert.

The Achiever seeks his own standards, based on the logic of cause and effect and on goals which he has set and towards which he manages. The Achiever seeks the "right" answer—an answer that is based on logic. In so doing, he reconciles divergent views by using the logic of his clearly considered, data-driven standards. The Achiever shows "preeminent concern for overall system effectiveness in the environment" (Ibid, p. 46).

Torbert points out that people at the Diplomat, Technician, or Achiever levels do not question the value of the standards they hold. They manage well within the system to which they subscribe, but they do not have the capacity to stand outside this system and critique the values on which it is based. By contrast, at the next level—that of the Strategist—"a person ceases to take the existing overall structure of social systems for granted as appropriate (or at least inevitable) and therefore becomes interested in what a normative (a best, a just) structure would be" (Ibid, p. 51). Strategists call into question underlying goals, values, and structures. They feel "the need for a synthetic, post-objective theory that coordinates multiple realities" (Ibid, p. 52). The Strategist wishes to judge every situation within its own context and on its own merits.

The levels of adult development briefly examined above can help us better understand the multiple ways in which different Human Resource Developers might make judgments about whether or not behavior represents performance with integrity. In the next section of this paper, I illustrate this point by using the criteria in Table 3 to analyze several examples from practice.

Critical Incidents: What Integrity Means to HRD Practitioners

Challenges to integrity in HRD can be dramatic, as might occur when faced with public crises that speak to the company's code of ethics, when the potential exists for financial or other kinds of gain because of one's position or privileged information, or when bending or breaking rules enables the company to close a deal. Issues of integrity, however, can also be more subtle; they show up in smaller daily incidents as questions of professional judgment.

Several HRD managers with whom I spoke in preparing this paper,[3] for example, equated integrity with upholding standards despite pressure from others to the contrary. A specific example involved the lack of integrity of brokers, who are paid to offer professional judgment about the merits of various vendors, but who often take a neutral stance in order to please the customer and get their commission. Integrity was also described positively as the creation of a system to ensure fair play or access, such as one company's system of shared information for its vendors. The company encouraged honesty about boundaries, clarity as to what vendors could or could not do, and sharing of information without "stealing" it.

Several examples, all reported by one contact, highlight awareness of conflict between what the company asks of HRD professionals, and what HR professionals perceive their role to

be vis-a-vis the best interest of employees. One man working in a pharmaceutical company stated, "HRD is an oxymoron today. Performance today is all that counts. Get the job done without going to jail." His sentiments were echoed by two other women, one of whom commented that management held information back because she might "turn them in." She felt "torn between being 'management' and 'representing employees.'" Two additional women (who worked, respectively, in a brokerage firm and in a telecommunications company) commented that they felt their organizations did not show integrity when they avoided the retaining and developing of employees by using outsourcing, downsizing, and the easy replacement of one set employees by another in pursuit of the "right match of skills."

Beyond their explicit content, these examples serve in another way to illuminate the complexity of integrity issues facing HR practitioners. While they all speak to a concern for people, they also speak to a sense of helplessness and to difficulties in integrating and managing conflicting concerns. My contact speculated that these HR managers feared losing their own jobs. Their dilemma might be the double bind that if they did not follow orders, they would not do their jobs as defined, but if they did follow orders, they would not meet their own standards of performance. Multiple "goods" exist, and it is difficult to sort out competing concerns: the employee who is being "hurt," the HR professional's own welfare, potential impact on the morale of other employees, or the profitability and success of the organization.

In what way do the criteria associated with developmental levels help us to better understand issues of integrity? Two examples, described here in more depth, illustrate the way in which the criteria in Table 3 shed light on this question by examining differential responses to the meaning of integrity.

Leadership Training in Asia The first example comes from a male American HRD professional, whom I call Tony, who was conducting a six day leadership skills course in India for 45 entry-level management trainees from different parts of Asia. In the middle of the course, an Asian woman, whom I have named Lin, asked Tony if she and six colleagues from her office group could "skip" a day-long, hands-on module on presentation skills because Lin said that they had received training of this kind before, and that they had other work to do. Tony refused permission because the course was mandatory, their absence impacted on others, and he believed that they would benefit from more practice in presentation skills. Five of these seven people, including Lin, nonetheless did not show up until lunch. When they returned, Tony first confronted Lin, who "acknowledged she had no excuse, and that she knowingly and deliberately disobeyed" his instructions. Tony was angry, but tried to focus on his perception of the issues at hand. He talked to all five together. He asked them to apologize publicly to their group and to write him a letter of apology telling him what they had learned from this experience.

In this example, Tony spoke of several dilemmas that he experienced around integrity. If he said nothing, the trainees would think they could challenge the rules and do anything they wished without consequence, there or back on the job. Tony would also betray his own beliefs. Further, given the Asian culture, any "punishment" could cause those apologizing to "lose face"—e.g., holding them back from "graduation," reporting them to management, or publicly challenging them—and perhaps make it more difficult for them to further learn from their actions. If the trainer reported them to their managers, consequences could be especially severe, but if he did not, he might turn his back on potential long-range problems for the company.

Developmental Perspectives on the Case. Tony chose what he felt was the lesser of many "face threatening" evils, but nonetheless these trainees were publicly challenged, and hence expectedly were embarrassed in front of their peers. Using the criteria in Table 3, we can speculate on the integrity concerns that hypothetical observers at different developmental levels might express regarding this case.

The Diplomat's reaction to this situation would depend on her relationship to these people, and whom she perceived as the most influential figure. If she could identify with people in the case, she might agree with Tony's decision if she aligned herself with management, but feel highly distressed if she held one of the trainees in high regard.

By contrast, the Technician would honor the advice of an expert. His view would depend on the kind of expertise he valued. For example, he might hold in high regard the subject matter experts on leadership whose ideas guided the development of this course. Therefore, he might disagree with the Tony's judgment and insist that the trainees should not graduate under any circumstances until they could demonstrate mastery of the content of the lesson they missed..

From another perspective, the Achiever is concerned with what is appropriate for the

system as a whole. She might disagree with the Tony's decision to refrain from notifying the managers to whom these trainees report. She would judge that their conduct signified deeper problems that would show up in other ways back on the job—a concern that Tony also expressed.

On the other hand, the Strategist might question the value of mandated training for its own sake. He might sympathize with the reasoning of those participants who felt that they had already taken presentation skills, and therefore, would find repeating this portion of the course a waste of time. In order to surface and learn from different views, he might engage the entire class in an inquiry into the legitimacy of claims and consequences. He could ask members what they would decide, given that the course's aim was to develop their capacity as leaders, and use the real-life dilemma as an opportunity for their own deeper learning.

Re-engineering a Systems Group A second example comes from an internal HR manager whom I will call Elizabeth. Her company was being re-engineered from top to bottom as a team-based organization. The change was triggered by conversion to a unified computer system. Everyone's job was to change; no position was guaranteed. A uniform selection process was put in place to match qualifications with job requirements. Each new job description was to specify required competencies in addition to other qualifications. The idea of competencies was not new, given that a competency-based employee development process had been put in place in the past year. In addition, Elizabeth was in the middle of developing a new computer-based 360-degree feedback system—that was also based on competencies and that would be used voluntarily by employees seeking information for their individual development.

The story unfolds in the systems group. It involves Elizabeth; one of her direct reports whom I will call Sally; Elizabeth's manager whom I will call Jim; and the HR Director, whom I will call Sue. At a meeting at which Elizabeth was absent, Sally and Jim decided to do a trial run of the 360-degree-feedback system, and to make these data available in the selection process. No one further consulted Elizabeth prior to sending a memo out to the group under Sue's name asking for these data. Elizabeth saw that employees might question the use of data that were not being collected and used elsewhere in the company to make selection decisions. In addition, the 360-degree feedback system was never set up to facilitate such decisions; its purpose was solely developmental. At the same time, Elizabeth wanted to maintain the credibility of Jim and Sue with employees. As a solution, Elizabeth advised that the data be collected, which meant that Sue did not have to publicly retract her decision, but suggested that the selection committee not rely on these data for making key selection decisions.

Table 4: Characters and Reporting Relationships in Re-engineering Case

Elizabeth	HR manager
Sally	Elizabeth's direct report
Jim	Elizabeth's manager
Sue	HR Director for entire group

Developmental Perspectives on the Case. Using the criteria in Table 3, we can again speculate on the integrity concerns that hypothetical observers at different developmental levels might express regarding this case. A Diplomat, in seeking to align with the opinion of the person whose influence most counted, might agree that Elizabeth acted with integrity if his main concern was protecting Sue's reputation. However, he might disagree with Elizabeth if he were most influenced by someone else with other standards for integrity.

A Technician, by contrast, in seeking the advice of an expert, might agree that Elizabeth acted with integrity for different reasons, primarily, that experts in HR processes support the idea of a uniform selection process. A Technician might also judge that Sally and Jim did not use good professional judgment by not acting in accord with this expertise.

The Achiever, on the other hand, would be concerned with the best systemic solution. He might argue that disgruntled employees could charge that the selection committee could easily be influenced by whatever data they had available even if officially considered "secondary." Integrity for him would be better served if Sue retracted her memo.

Let us assume that a Strategist held the view that maximum information was essential to the best personnel decisions—both for the candidate and the organization—and that equity in access procedures was secondary. She might question the need for a selection process that could not take into account additional data, if it were available, so that people could be best judged on their own merits even though, for many, fair treatment of employees would be synonymous with

following the company-wide rules for selection decisions. She might engage key representatives of the systems group in a collective decision about the added value of these data.

Implications for Performance with Integrity

What conclusions can we draw from development theory and from the examples discussed above? At the beginning of this paper, I argued that integrity is a social construct. My discussion of developmental levels underscores this point.[4] At the same time, my discussion also underscores the difficulty of constructing a code of conduct, should we wish to do so, that everyone would respect and implement.[5] Research by Torbert and Kegan on managers suggests that most HR practitioners are likely to be Diplomats, Technicians, and Achievers, and that a few will be Strategists. It is impossible to predict a Diplomat's judgments because he depends on influential others, but we know that Technicians will be guided by the consensus of experts, and that Achievers will agree with judgments that can stand up to the test of logic and rationality, given the goals set by a system. We can expect Strategists to seek a richer analysis of the context, and be guided ultimately by principles that enable them to step back and question the system if they think that it needs questioning.

Moreover, people at lower levels of development find it difficult to understand the reasoning of those at higher levels, and vice versa, unless a person has arrived, minimally, at the Strategist level, in which case she would be able to judge different perspectives in their own context. Torbert and Kegan argue that people at higher developmental levels can and should work toward expanding the thinking of people at lower levels. As professionals who are concerned with human development, I'm sure we would agree. However, I would separate this educational goal from the utilitarian goal of clarity that a code of conduct could provide.[6]

I conclude that a code could not be developed that would have uniform impact on people at every developmental level. Should we, then, abandon the idea of a code? Alternatively, we could design a code that would suit the judgment of: (1) People at a level that we believe is most appropriate for our profession and the workplace at this time in our history; (2) People at levels that represent the majority of practitioners; or (3) Some combination of people in categories (1) and (2). If we follow the first alternative, we would then have to make judgments about what that level ought to be, and we would have to engender commitment to strive in that direction. If we follow the second, we would reinforce the current level of thinking of the status quo, which would not develop capacity in the workforce to address future challenges. For example, Kegan and Torbert argue that modern life and organizational transformation demand the skills, minimally, of a Strategist.

I would recommend the third alternative, and suggest that a code be constructed that would enable Technicians and Achievers to follow a minimum set of core guidelines, but that would allow some leeway so that the Strategist could argue, case by case, that an alternative solution would be more appropriate in a given situation. Strategists need leeway, but if the code allowed for too much, every decision would be made by exception. Thus, the argument for a code—the clarity it can bring to decision making—would be weakened. I recommend a code that is constructed by experts, so as to appeal to Technicians, and that lays out a coherent logic that enhances the goals of the organization, so as to appeal to the Achiever. Diplomats might not get their needs met, but their reference point is idiosyncratic, and thus more difficult to address.

I make this recommendation knowing that it is not an easy one to follow. We are left with the question of how to construct such a code. It is not enough to simply accumulate wisdom from both practitioners and experts as to the kinds of dilemmas such a code should address, and the recommendations they might make for their resolution. Such systematic data collection would provide a comprehensive list of types of situations that could be addressed. However, conflicting viewpoints would also have to be reconciled. That cannot be done by majority vote; a panel of people need to think through the coherency and consistency of the code.[7] A code should contain clear statements about the values that influence principles that are generated to guide action so that people know the basis for the recommendation. The thinking that leads to each principle should be made explicit and, whenever applicable, experts whose judgments underlie the principle should be identified so that people can seek further information about the source for judgments. A series of questions should be generated to aid in thinking through the application of the code. Some of these questions might include: Who are the stakeholders in this situation,

and what perspectives (developmental or otherwise) might they hold? What factors need to be considered that bear on the solution? Which of the organization's values might be served by different solutions, and how do these values compare to one another if they conflict? What are the short-term and long-term impacts of various actions? What criteria should we use to reconcile competing demands?

Questions such as those just raised will help to surface differences in values that underlie decisions about integrity. Felkins, Chakiris and Chakiris (1993) suggest that ethics codes, which are related to integrity, though not perhaps synonymous, can be based largely on a virtue model, a social contract model, or a utilitarian model. All of these models fundamentally rest on the nature of the values being used to make judgments about what is "good." This is nowhere more apparent than in the utilitarian model, which seeks "the greatest good for the greatest number." In the utilitarian model, values must be clarified in order to reconcile conflicting viewpoints. Felkins et al argue that this model is especially appropriate to complex systems in which many different stakeholder perspectives are being taken into account. The utilitarian model seems to me to be most appropriate, as well, for developing a professional code of conduct for HRD. The challenge lies in developing a process that draws out differences and the thinking that underlies them, but that also does not leave resolution of differences to the most powerful voice present primarily because that person holds the most weight. A professional code of conduct that speaks to integrity must enable socially-constructed decisions to be made based on principles that everyone can understand, even if they might not individually be preferred.

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[1]My thanks to Christine Harris who critiqued these ideas in light of her own work (Harris, in progress), and to Peter Neaman—both of whom helped me to organize this paper.

[2]Samples include: 37 first-line supervisors, 100 nurses, 177 junior and middle managers, 66 senior managers, 104 executives, and 13 entrepreneurial professionals. Note that the remaining 2% of the sample fall into the "opportunist" stage preceding the "diplomat" stage.

[3] I asked five doctoral students to identify situations they face around integrity. One of these students also contacted six HR practitioners. One person also gave me his corporation's formal code of integrity, and training material used to orient all employees to this code.

[4]Other forces that bear on the social construction of judgments, but are not probed here, include differences that arise because of gender, race, class, or national culture.

[5]Even if a code were constructed, the profession is not recognized as an accrediting group and thus cannot enforce any sanctions if the code were broken. Also, the organization would likely hold sway if it disagreed with judgments of individuals or the profession.

[6]Judgments about integrity, moreover, typically have to be made on the spot. A code of conduct that requires a lengthy process of educational interpretation could not be easily used.

[7]In fact, strategies for facing, understanding, and reconciling conflicting views—and even, whether or not people are willing to take this on—also vary by developmental level.

Incorporating Continuous Learning Into A Cultural Change Process

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Companies undergoing transformation will need new competencies that extend from the shop floor to management. The learning needed emphasizes not just a laundry list of skills but rather encourages core competencies and flexibility that can facilitate a shifting and adapting as needs command. Best practices for the needed learning embrace challenge, self-organization, and growth. This transformation requires a leader who takes those needed calculated risks and creates that culture in the corporation.

Introduction

Cuts in defense spending have put pressure on many small-and-medium-sized companies to take part in a technology transfer process that will advance their survival and growth through conversion to commercial production. This technological transfer will require learning which will facilitate a shift in critical skills and technological requirements. It will also require changes in organizational culture and environment that will cultivate that transformation. Done correctly, this workforce development will position both the firms and their employees for success in commercial markets.

The learning needed for the crucial change companies must make goes beyond any specific courses of study or sets of skills. The workforce must become adaptable, flexible, multi-skilled and team-oriented. New competencies will have to extend from the shop floor, to management style, to marketing. With defense cutbacks, this must be done in firms set in an environment where the company and the workers alike were told what was needed, how to do it and when. Now these companies must probe the markets, define the customers, fathom and satisfy customers needs, and change their own organization to meet the new challenges.

Methodology

This research focuses on identifying the best practices of companies that have been successful in making the transition from a reliance on defense spending to commercial markets. This was undertaken by interviewing and surveying a cross-section of key employees: senior executives, middle managers, and front-line workers, from several companies that have made or are well on the way to making the transition. The best practices of companies going beyond training in making such a transition can be exemplified by a medium-size firm, Hope Webbing.

Hope Webbing

Founded 113 years ago, employment reached its peak with 1,300 workers employed during World War I, when Hope Webbing became a world leader in manufacturing narrow fabrics and braids. By the mid-sixties Hope was the largest manufacturer of shoelaces in this country. In the

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following decade, the company diversified into government cords and braid, manufacturing most of the world supply of parachute line. The company employs about 450 workers divided between two plants in Rhode Island.

The current management team joined the company in the late seventies and early eighties. Since then, Hope has become one of the most diversified textile companies in the world. Considerable amounts of capital have been invested in state-of-the art weaving and knitting machines, as well as in dyeing and finishing equipment, sewing machines, dielectric machines, sonic welders, and other peripheral equipment. Most of Hope's equipment is built in-house.

Much of the Hope product line is not very exotic, yet robust market and product development efforts have allowed for success in niche marketing. Sales have been growing at a rate of twenty percent a year for the past five years and that growth is expected to continue.

In 1980 Bruce Hauser took over as president of Hope Webbing Company[1]. His philosophy and style became a key driving force in Hope's transformation and growth as changes stimulated by defense spending cut-backs combined with other market forces. Hauser explained his underlying organizational philosophy this way:

> I believe in small, specific, individual groups of people that are forced to work together and rise together and fall together. An organization in my mind really is an amoeba. Hope Webbing is only the sum of substance of the attitudes in the people who happen to show up today. They, too, all have different skill levels that help that amoeba become stronger. Because, the more skills, and I don't care what the skills are, that you put into that amoeba, the stronger it gets. The organization can hopefully use those skills to build upon.

Arriving at Hope, Hauser asked "What opportunities do we have?" The attitude within the company at that time was, in Hauser's words, "... is he kidding? We're history, what do you mean opportunities?" Hauser set out to switch the Hope culture from the feeling of "we can do nothing" to "wait a minute--if we keep our noses to the grindstone and play our cards right, and do our thing, we can succeed in that other big world out there."

Hauser's view of providing leadership in his role as a catalyst for change was one of risk taking. He believes that some people are afraid to take that necessary risk so, as a leader, he takes that risk for them, saying "here's what we're going to do." For Hauser that style allows both the company and its people to grow. For Hauser, no operative part of any company is ever really strong enough. Growth and development are an on going process.

Working Model

The following working model illustrates the overall conceptual framework used to guide our research. The underlying premises in this model indicate that this is a dynamic process that is being mapped and that the interrelationships and interconnections are being captured. In interviewing organizational stakeholders, an exploration was undertaken of their vision of the future: where they want to be, competitive considerations, etc. There is a creative tension between an idealized future and current reality. Current reality takes into consideration current processes, the organizational culture, and identifying core competencies and technological expertise. Throughout this transformational process, special emphasis is given to managing this change process. Organizational objectives would be to encourage continuous improvement and breakthrough thinking.

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[1]The name Hope will be used throughout this paper.

CREATIVE TENSION:
CURRENT REALITY/FUTURE ASPIRATIONS
- Identifing core competencies/ technological expertise
- Understanding current processes and culture

VISION OF THE FUTURE
- Developing Stratigies
- Articulating Missions, Values, and Goals

TRANSFORMATION PROCESS
- Managing Change
- Continuous Improvement
- Breakthrough Thinking

Relationship to Other Research

Defense-related firms are planning for and fashioning their needed changes in various ways. Different strategies are emerging: some companies are consolidating into key technologies; some are actually expanding their defense holdings by acquiring other companies; others are leaving the defense market completely; and others are committing to the conversion approach. Several analysts agree on a matrix for success: stable financing, management skill, and innovative technology (Pages, 1993a). This research focused on internal conversion approaches.

What emerged from the data was a far more expansive way of relating our findings to the research. In addition to the key components identified in the Working Model, the researchers began to notice how these findings also related to the concept of self-organization. Self-organization allows and amplifies unpredictable fluctuation and differences rather than abolishing or controlling them (Goldstein, 1994). It is also the generation of vision, mission, and purpose (Goldstein, 1994, p. 2). It has been postulated in research on leadership that when an organization has a clear sense of its purpose, direction, and desired future state and when this image is widely shared, individuals are able to find their own roles in the organization (Bennis & Nanus, 1985, p. 90).

We are also inherently dealing with the change, growth, and development of nonlinear systems. Here is where we see the reference to the amoeba phenomenon that was expressed by the president in our preceding story. It begins by asking two questions: "What is reality?" and "What is meaningful to get to the goal?" Asking these questions begins the process of self-analysis and self-reflection. The key concepts of leadership, core competencies, and best practices which emerged from the data will also be expanded upon in this section.

Primary Findings

The data gathered is used in developing a paradigm of best practices for organizations in their quest in making this crucial transition.

The desired technological transfer must be framed within the Department of Defense goal of the preservation of critical technological and industrial capacity. Preserving critical technologies will entail difficult choices and tradeoffs. Their viability will ultimately depend upon the survival of hundreds of defense-dependent firms that must undertake the most fundamental adjustments in their business systems and underlying corporate cultures. Firms that have operated almost exclusively on the basis of defense-related technical performance must now learn to survive within the broader marketplace, where price and consumer preferences dominate. These firms will have to revamp their training programs, their approaches to learning, and their work place culture. The crucial goal of the revamped learning programs will be the fostering of the skills, ability, and motivation needed to be a part of a corporate cultural change.

Workforce Skill Needs

Throughout the years as Hope expanded and changed, President Bruce Hauser was very aware of the pressure building on the staff:

> For people who are at a management skill level of running a hundred people, it gets very, very different when it's five hundred people, and it gets different again when the boss says "we now have two plants, and we now have these three new technologies, and by the way, within the next six months we'll have a European division.

Hope's production still often takes place on specialized equipment developed by the company. Developing textile equipment to meet special production challenges continues as part of the corporate culture. This has strategic advantage and also affects skill needs. Making a product that nobody else is making, on a piece of equipment that you build yourself, may be necessary in the specialized industrial textile field. Most important for this study, taking that path, the company's human resource strategy became well defined:

> ...you can't go out and buy skills that are definable to making that product. If you're making a new widget, then you have to build those skills internally, but they're certainly adaptable from a general skill level.

The capability to build on the general skill level is an advantage for a company like Hope. The needed selling, manufacturing, inventory control, and data processing skills are the common tools. However, if you are going to break new ground and do new things, then the answer to "What skills do you need?" must be found out as you go along, and somehow a firm has to acquire those skills. The firm can't know what is needed until it moves in those new directions. At Hope they could see the importance of flexibility, information, and understanding as the new learning challenges. Hauser saw these skills as especially crucial to the top staff:

> Can you manage what you don't understand? You better know specifically how to do each one of the jobs there. Because you can't lead into contributing to the company without it.

Human Capital and Training

Hope classifies all workers based on the job that they are hired to do. Most are machine operators on the production line; some mechanically-inclined positions are classified as indirect labor. With growth, the company has had to supplement some old equipment with new machinery and hire additional machinists, welders, machine-fabricators, and the like. However, a more-or-less informal development of such skills internally is the preferred practice. The company sees most of these workers as best described as semi-skilled.

Jim Hanahan, the plant manager, explained the basic human capital policy this way:

> What we look for is a multitude of things, depending upon the job. We look for a very articulate, detail-type individual who can be a sewer. Whereas a floor person is bull-work. You don't have to be as articulate as a sewer. In our mechanically inclined positions, that's exactly the type person that we're looking for: someone who can handle machinery, can handle a wrench, can go in and trouble-shoot, can set up machinery. We either get an individual off the street who has been working for a similar industry, a loom fixer, a braider fixer, a machinist, or we train them. And a lot of the people that we have here today started out for us as operators and have moved into a mechanical position

because they've grown with us.

The start up training process for workers is very simple: When new employees first come in, they sit down and read the standard operating procedure for their particular position. After this they are put on the line as trainees working with experienced employees. Depending upon his or her ability and upon the difficulty of the job, an individual may in three hours be full blown in production. This is true of the most simple jobs, but it may take six months or longer in more difficult positions. Beyond the production floor, Hope offers training ranging from ESL classes to one hundred percent payment for college courses related in some manner to one's job.

At companies such as Hope, defense conversion has fostered a need for rather limited new training. As Jim Hanahan, a plant manager, described it:

> Well, we've been able to move workers to other areas. When we make a parachute cord, we have about seven processes before it leaves the plant. In those seven processes we've been able to take each department, if you will, and utilize that equipment, those people, on other items similar in construction and fundamentally you run the machines the same, but just a different end use. (Hanahan, 1995.)

A need for cross-training arose in the finishing departments. The company's basic material, narrow fabric, is braided, loomed, or knitted. Those machines and the operators who run them, run them the same regardless of the end-product. The finishing departments, on the other hand, may have workers trained on five or six different work-in-processes.

Cross-training is one way for advancement at Hope. Company culture assumes that most workers are interested in progressing and most of them are. Workers begin to cross-train as needs arise, which happens quite frequently in a company in a transitional phase.

On the shop floor, doing training is part of the standard job description. Standard operating procedure has training take place through working on the job with a trained qualified lead person or fellow employee. All floor supervisors are expected to be well versed at each process that they are in control of. Hope's management is confident that the people who do the training know how to train and know the job well enough to train.

External training is used periodically at Hope, usually in the form of seminars on topics such as quality and supervisory skills. Lead people and supervisors are the usual participants; lower-skilled production workers are not often sent for outside training.

Jim Hanahan thinks the Hope human capital and training strategy works well and gave this example of that:

> This morning we had a problem with the braid. Our R&D had developed a braid that was supposed to be smooth and made of a certain tensile strength and we get into production into coating line, and it's coming out very bumpy. So I go back and I talk with the mechanic. We made a sample this morning, and I'm very confident that what the individual proposed will work, because . . . And this individual cannot read English, but he can run machines.

Hanahan is confident that even with an engineering problem, Hope has developed the skills right down to the shop floor, so a mechanic can look at a problem and say, "Oh, I know what to do with that."

A Learning Philosophy

Involvement in the life of the organization, is key to a learning management style. At Hope that involvement centers around weekly "Hours and Outs," a one page, one-to-five bullet essay by managers. The topic is "What did you do to affect the company this week? What are you

planning on doing next week?" Hauser came to Hope to act on his view that it is much easier to affect a small company than it is a large one. Individual involvement is the essence of learning and change at Hope.

President Hauser has security screens in his office and keeps everyone connected by radio. The idea is that everyone should be able to hear and sense and feel the pulse of the company all day long. "I hate meetings, because people are not real at meetings." Hauser asserts that the radio system, as the basic communication device, lets "everybody know, all the time, what's going on."

The philosophy is that people are motivated and want to do well when they are in a constant information flow. It is that information flow that makes people "the best you can expect." The learning function of the radio connection was explained this way:

> If I have a 3-minute conversation with my QC manager over the radio, everybody involved in that product line, from the selling, from the accounting, from the production of those functional aspects, they all hear it and know right then what is going on. Reality changes as you go along.

The constant information flow is part of the aim to avoid working within a rigid structure. If anyone has any question, about anything going on in the company, they are expected to go to the person who they think can best answer that question, even if it isn't within their functional responsibility. Continual learning from whatever source is fostered by the movement of knowledge quickly and efficiently throughout the company is both the root and the fruit of Hope's culture.

Leadership for the Move Beyond Training to Culture Change

Leaders think about goals; they shape ideas instead of responding to them (Zaleznik, 1992, p. 128). The president of Hope presented the researchers with a very specific example of this leadership capability. He said that:

> Some companies go out, see a market or a market potential, build the plant, then decide how to fill it. We do just the opposite of that. We go out and see a market...and we involve ourselves in that market...and attempt to get the customers to want to do business with us, then decide how we're going to build the plant.

Seeing things as opportunities is another hallmark of leadership (Bennis & Nanus, 1985). The president came in with this kind of vision. He'd say, "What opportunities do we have?" "That void creates an opportunity for everybody within the company..." Holding steadfastly to this philosophy helped turn Hope around. Now the employees believe that they can succeed; they believe that it is worth a try. Commitment also signifies that what one believes in, one is willing to commit to or invest in, whether it be an investment of time, money, and/or self. Hope Webbing demonstrated its commitment to the employees by reinvesting better than 20% of their bottom line into R&D and in also giving the employees choices when key decisions affected them. This philosophy in committing to getting the employees involved is taking the "management by walking around" concept and living it every single day (Bennis & Nanus, 1985). Bruce Hauser lived that view by his belief in the need to "hear, sense, and feel the pulse" of the company all day long.

Core Competencies

"Core competencies" is being defined as the combination of individual technologies and production skills that underlie a company's myriad of product lines (Hamel & Prahalad in Salk et al, 1992). For example, Sony's core competency in miniaturization allows the company to make everything

from the Sony Walkman to videocameras to notebook computers (Salk, Evans, & Shulman, 1992). Canon's core competencies in optics, imaging, and microprocessor controls have enabled it to enter markets as seemingly diverse as copiers, laser printers, cameras, and image scanners (Salk, Evans, & Shulman, 1992). The same idea applies to Hope; this is applicable from two perspectives. One, there is the belief that this company has a baseline competency in industrial textiles. To apply that baseline competency to a whole range of products, from shoelaces to bungie cords to aircraft parts, they ask themselves, "How can we contribute to this world with what we have?" This allows them to see beyond the ordinary applications, to reach further. In addition, there is also the strong belief that because each and every employee possesses a different skill level, they all help the "amoeba" become stronger. As Hauser phrased it, "the more skills, and I don't care what the skills are, that you put into that amoeba, the stronger it gets." This manifests a respect for the contribution of individual skills, yet recognizes the synergistic relationship with the growth of the organization.

Another company we interviewed had the same philosophy. Their basic competency was in castings that could be used by many different clients. This particular company saw it as their responsibility to re-imagine a new strategy and expand the boundaries; i.e., to look at things in a broader way.

Learning Organization

Some of the key concepts discussed above encompass the underlying philosophy of the learning organization. Organizational learning is defined by Senge (1990) as a place:

> ...where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together.

The learning organization is skilled at five main activities: Systematic problem solving, experimentation with new approaches, learning from their own experience and past histories, learning from the experiences and best practices of others, and transferring knowledge quickly and efficiently throughout the organization. The president of Hope seems to exemplify that mindset. Taken as a whole, these fundamental components of leadership skills, core competencies and, organizational learning are the "best practices" that have been identified within Hope as those driving forces contributing to their effectiveness as an organization and to their financial success.

Conclusions

For companies facing portentous market change, positioning for the new market environment is the most important strategy. This is the area of skill most often cited by top management. It is also the realm of corporate culture that needs the greatest change.

The learning needed for the crucial change companies must make goes beyond any specific courses of study or sets of skills. The workforce must become adaptable, flexible, multi-skilled, and team-oriented. New competencies will have to extend from the shop floor, to management style, to marketing.

In these successful companies, changes to organizational culture came as a result of the style of leaders who made the company cognizant of the market-driving forces and who had the commitment to constantly scan the marketplace for new opportunities. This transformation requires a leader who takes those needed calculated risks and encourages that culture in the corporation.

In all of the successful firms studied, there was specific emphasis on not looking at skills as a laundry list but rather on encouraging core competencies combined with a flexibility that can encourage a shifting and adapting as market requirements command. Top management nurtured

an environment that stimulates workers to generate the skills needed to meet all challenges.

Marketing, along with the ability of all employees to respond to new technical demands and standards proved to be two special skill areas that needed development. Going from relying on defense-related work, where contracts were specified in great detail or on very standardized commodity products, to a market strategy of involvement, risk taking, innovation, and new market capturing capabilities, was very successful.

Challenging influences have the potential for fostering self-organization and growth in an individual by presenting opportunities that disrupt the equilibrium or status quo in the organization and in people's relationship to the organization. It is then up to the individual to rise to the challenge. The environment and culture created by challenge fostered growth and development for the people interviewed for this study. These changes affected employees from the production line to top management.

In rapidly changing markets, such as those facing companies undergoing defense conversion, best practices for learning may be those that created an environment encouraging challenge, self-organization, and growth in an individual, thus cultivating the new needed workforce skills and competencies.

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The Business Focus of HRD Leaders: A Picture of Current Practice

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The purpose of this study was to determine the factors influencing success for HRD leaders. A nationwide study of 300 HRD directors identified how they acquired their knowledge and skills. Also rated were the skill sets that were identified as most important for achieving their HRD goals, most frequently used, and most challenging. The most significant were those skill sets related to the business needs of the organization.

The literature has described competencies for HRD practice, including a generalized list describing HRD leadership (McLagan, 1989; Rothwell & Kazanas, 1994; McCoy, 1993). The "Models for HRD Practice" study (McLagan, 1989), now seven years old, described primary HRD roles, but did not exclusively focus on the role of HRD leaders. According to Filipczak (1994), the HRD field is lacking data on how HRD leaders should be selected. Most importantly, since the publication of "Models for HRD Practice", there has been little research on HRD competencies that incorporate recent business developments having an impact on HRD leadership.

Recent significant changes in the way HRD practitioners do their work include the following:

- Large scale, real time strategic change (Jacobs, 1994; Rouda & Kusy, 1995);
- Greater emphasis on globalization efforts (Witkin, 1992) including partnerships, mergers and acquisitions;
- A business-driven need to develop an evaluation model grounded in research (Holton, in press);
- More participative strategic planning with inclusion of key stakeholders from throughout the organization (Kusy, Isaacson & Podolan, 1994).

Research Questions

The purpose of this research was to field test the variables that the literature and subject matter experts have hypothesized to be associated with HRD leadership success. The research questions were: How do people with responsibilities for HRD leadership acquire the necessary knowledge and skills needed in their practices? What are the most important factors contributing to their successful development as leaders?

Methodology

The authors went directly to HRD directors to answer the research questions. The authors constructed a preliminary list of variables hypothesized to be associated with HRD leadership success by examining the HRD literature over the past 10 years and conducting both interviews and a focus group of subject matter experts. The focus group consisted of 12 members of the

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Board of Directors from the Southern Minnesota Chapter of ASTD. The interviewees were HRD leaders noted as successful by members of the Southern Minnesota Chapter of ASTD Board.

The qualitative data were analyzed and incorporated into a 14-item questionnaire that was piloted with 10 HRD leaders. Final survey revisions were made to improve the content and process of the survey. The survey, distributed to 300 randomly-selected national ASTD members with the title of HRD director, incorporated both qualitative and quantitative items.

Follow-up research was conducted by implementing focused interviews of HRD leaders to corroborate the data from the survey and identify additional variables. Thirty national HRD directors were randomly-sampled from the ASTD Membership Directory (1995). The 30 names were divided so that each researcher called 10 HRD directors. Responses were received from 14 HRD directors. The interview consisted of the following open-ended questions:

1. What are your current job title and responsibilities?
2. How did you acquire the knowledge and skills for your current position?
3. What have been the factors most critical to your development as an HRD leader?
4. In the last year, what has been your most challenging task?
5. In the last year, what has been your greatest professional achievement?

The data were analyzed for consistent themes.

Results and Conclusions

Mail survey. A total of 97 surveys (32%) was returned from HRD directors who represented 20 industries, the majority of which included respondents from manufacturing, health care, non-profit, education and hospitality industries. The following results were observed:

HRD functions performed. These data reflect the continuing need for HRD directors to be multi-skilled:

- 85% stated they performed training and development (T&D),
- 68% performed organization development (OD), and
- 47% performed career development (CD).
- In addition, 42% of all respondents stated they performed all three of these HRD functions.

How HRD directors acquire their knowledge and skills.

- 90% reported acquisition from on-the-job experiences,
- 79% noted acquisition from seminars and workshops,
- 61% cited mentoring relationships as instrumental to their development.

The expected accuracy of a sample of size 97 is plus-or-minus 14%. This means that a sample percentage can be expected to differ from the universe value less than 14% at the 95% level of confidence.

Skill acquisition. The HRD leaders surveyed acquired their knowledge and skills in a variety of ways, primarily through on-the-job experience and through seminars and workshops. The results are shown in Table 1.

Skill sets for HRD leaders. HRD directors were also asked to rate eleven skill sets according to three dimensions: importance for achieving their HRD goals, frequency used on the job, and degree of challenge they experienced in reaching mastery. These 11 skill sets and the survey results are shown in Table 2. An analysis of variance was used to determine whether the means differed only by chance. The analysis showed that there were significant differences in the mean values in each of the three dimensions.

In order of importance, the following are factors the HRD leaders said were both most important and most frequently relied upon to achieve HRD goals:

1. Understanding the business of the organization,
2. Partnering with line management, and
3. Being an organizational change agent.

It is significant that these three skill sets relate to the business needs of the organization. The data in this study reflect recent business changes that are placing new demands on HRD leaders.

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The skill set cited as the most challenging to reach mastery was being an organizational change agent. It is noteworthy that career planning and counseling were rated lowest in importance, frequency used and degree of challenge. This corroborates the research conducted by Ulrich, who found that career planning and development received the lowest ratings in surveys measuring perceptions of companies' human resource departments (Ford, 1993).

Table 1
How HRD directors acquired their knowledge and skills.

Method	Percent indicating primary ways they acquired their knowledge and skills
On the job experience	90 %
Seminars and workshops	79 %
Mentoring relationship(s)	61 %
Master's degree	50 %
4-year degree	44 %
Corporate university program	16 %
Doctorate	13 %
2-year associate degree	4 %
2-year associate technical degree	3 %

Internal validation of mail survey. To determine the degree of truthfulness and consistency in the responses, the respondents rated:

- the importance of the skill sets to their development into successful HRD directors, and
- the importance of these activities in accomplishing their particular HRD goals.

The responses to both inquiries were consistent.

Follow-up telephone interviews. Fourteen telephone interviews were conducted to corroborate the survey data, and contained open-ended questions which yielded themes consistent with the survey data. These data show that the HRD leaders interviewed assign differing importance to a wide range of factors as being most critical to their development as HRD leaders, and about their most challenging tasks and greatest professional achievements. The focus on understanding and working with the business of the organization was the factor of greatest importance.

Table 2
Skill sets of HRD directors

Skill set	Average Likert-scale scores*		
	Importance for HRD goals	Frequency used	Degree of challenge
Understanding the business of the organization	3.8	3.7	3.3
Partnering with line management	3.6	3.5	3.2
Being a change agent in your organization	3.6	3.4	3.6
Being involved in strategic planning	3.5	3.1	3.3
Managing a training project	3.5	3.4	3.0
Recruiting the most qualified professional HRD staff	3.4	2.7	2.8
Influencing others to achieve HRD goals	3.4	3.4	3.2
Managing staff within the HRD function	3.2	3.3	2.9
Coaching & counseling others regarding job performance	3.1	3.2	2.8
Managing the administrative part of the HRD function	3.1	3.3	2.6
Career planning and counseling	2.7	2.7	2.5

*Likert values were as follows:

- the importance of this activity in accomplishing your particular HRD goals:
  1 = not important; 2 = low importance; 3 = moderate importance; 4 = high importance
- the frequency you performed this HRD activity on your job:
  1 = never do; 2 = rarely do; 3 = sometimes do; 4 = regularly do
- the degree of challenge you experienced in reaching mastery of this HRD activity:
  1 = not challenged; 2 = rarely challenged; 3 = sometimes challenged; 4 = always challenged

Recommendations

HRD leaders need a better understanding of the organization's business. Some of the ways this may be accomplished are suggested by the list of ways that current HRD leaders have acquired their knowledge and skills (see Table 1). Additional ways this may be done are:

- HRD curricula at universities need to be more business focused;
- HRD seminars and workshops need to increase their emphasis on business outcomes;
- Partnerships between business and education should be used to develop business knowledge and skills;
- Internships should incorporate business practices and experiences; and
- Operation personnel should serve as mentors and/or teachers to ensure the business relevance of educational offerings.

Furthermore, these survey data lead to important new questions about the practice and development of HRD leaders. Are HRD leaders actively practicing and excelling in the application of these important skill sets? Are these skill sets strongly considered in the selection and promotion of HRD leaders? Have university programs in HRD kept their curricula up to date so that HRD students will have the required competencies to excel in leadership positions?

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These recommendations are corroborated by other recent studies. Filipczak (1994, p. 3), says

> Training directors who get out into the operations of a company and ... actively "partner" with line managers who have real performance problems begin to evolve into a different kind of animal ... When training directors start moving away from traditional HRD and toward developing performance solutions for the company, they start to become what Mager calls performance directors.

Church & McMahan (1995) surveyed the key characteristics of OD in rapidly growing firms. and found that 94% of those surveyed agreed practitioners should focus more on business-related values and outcomes than on humanistically-oriented ones. Only 6% thought the field already placed enough emphasis in this area.

Hequet (1995) found that training and development professionals said the new trainer needs skills in business processes (knowing how things get done in business) and in facilitating organizational change.

Quinn (1996) envisioned an educational program that selected from a pool of applicants who "know business.":

> They will have completed MBAs, will have successfully risen in well known corporations, and will have shown clear abilities in the area of change. They will already understand and have mastered the administrative art of blending across those disciplines that are clearly separated in business schools.

An outgrowth of this current study could be an examination of what non-HRD leaders (i.e. the customers of HRD leaders) perceive as the critical variables for HRD leadership success. This examination would further help HRD leaders respond to the business needs of the organization by understanding key perspectives of their internal customers.

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How Human Resource Development Helps Small Businesses To Maintain A Competitive Edge: A Comparative Case Study

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While a great deal of attention is being given to human resource development in large Fortune 500-type companies, little is known about the extent and function of HRD in small to mid-sized businesses. This study delineates how HRD helps small businesses to maintain a competitive edge. The qualitative methodology employed in this study was a comparative case study. Three successful small manufacturing companies were selected. This study revealed six characteristics common to these successful small businesses: a) a belief in people as the primary source of competitive advantage, b) concern for employee well-being, c) belief that investment in employee development yields a return, d) meaningful employee involvement, e) open communication channels, and f) proactive leadership and direction from the top.

For American businesses to remain competitive in an increasingly global economy, some are calling for drastic measures to be taken. Business and government leaders continually lament the lack of motivation, education, and job skills of the American workforce but yet offer few concrete suggestions as to how to remedy these problems. The manufacturing sector, in particular, seems most at risk for losing its competitive edge (Mark, 1987). Increased automation, while stepping up production, has at the same time increased the demand on workers. These demands are set against a workforce that is less prepared in basic literacy and numeracy, is more demographically diverse, and is increasingly aging (Carnevale, 1988; Mikulecky, 1988).

Small businesses are playing an increasingly important role in the American economy as larger firms pare down their operations. "In the course of the 80s and 90s, Fortune 500 companies shed some 5.5 million jobs" (Dumaine, 1992, p. 23). Small businesses (those which employ 100 or fewer people) constitute 98 percent of America's businesses (Dumaine, 1992) and "small businesses are responsible for 82 percent of the jobs created in the United States" (Megginson, et. al., 1988, p. 247). Yet, of the over 600,000 small businesses started each year, 80 to 85 percent fail in the first five years with 9 out of 10 small manufacturing businesses going out of business in the first three years (The Small Business Handbook, 1990).

The economic well-being of some regions of the United States are dependent upon these small businesses. This is particularly true in the southeastern U.S. where the majority of manufacturing companies (88%) employ less than 200 people (U.S. Department of Commerce, 1990-91). While much has been written about why small businesses fail and what physical and fiscal resources are required for success, little is known about the role of human resources in the success of small businesses. There may not even be a clearly identified unit, department, or person having human resource responsibilities. Yet, it is likely that the success of the company is at least partially attributable to how the employees as a resource are attended to.

A recent research project helped shed some light on how employee satisfaction helps small businesses remain competitive. The purpose of the study was to delineate the role of human resource development (HRD) in successful, small to mid-sized manufacturing businesses in the southeastern United States.

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Methodology

A qualitative research design was deemed the most appropriate approach to understanding how human resource development functions in small to mid-sized companies. Qualitative research is descriptive research that seeks to understand, through insight and discovery, those processes which contribute to the greater whole of an event or phenomena (Bogdan & Biklen, 1992; Goetz & LeCompte, 1983; Patton, 1990). Because of its descriptive and inductive nature, it "holds the greatest possibility for making significant contributions to the knowledge base" in applied areas such as education and human resource development (Merriam, 1988, p. 4).

Qualitative case study research is a particular type of qualitative research. Its purpose is to describe and characterize the occurrence and possible evolution of a given phenomenon. It is a detailed examination and account of one particular context or setting (Bogdan & Biklen, 1992). "Case study, which has as its purpose the description and interpretation of a unit of interest, can result in abstractions and conceptualizations of the phenomenon that will guide subsequent studies" (Merriam & Simpson, 1994, p.99). It is a particularly useful design when the factors or variables of interest cannot be identified a priori, and/or are so imbedded in the context that it would be impossible to separate them out (Yin, 1992). Contexts that are naturally "bonded systems" such as a class, a family, a company, and so on, easily lend themselves to qualitative case study research.

Analysis of data across multiple sites constitutes what is called a comparative case study and involves both within-case and cross-case analysis. Within-case analysis typically results in detailed case study write-ups for each site or case. These write-ups are often simply pure description, but they are central to the generation of insight (Gersick, 1988; Pettigrew, 1988). In addition, it provides a rich familiarity with each case, which, in turn, accelerates cross-case comparison (Eisenhardt, 1988).

Coupled with within-case analysis is the cross-case search for patterns. Cross-case analysis goes beyond initial impressions and individual case descriptions (Gersick, 1988). In a cross-case analysis, the researcher seeks common patterns or themes that address the study's research questions. Cross-case analysis improves the likelihood of evolving theory with a close fit with the data (Eisenhardt, 1988). Also, cross-case analysis enhances the probability of capturing the novel findings which may exist in the data. Such a design serves to strengthen the validity and reliability of research findings.

Case Selection. Three companies were selected for in depth study. The first company studied is located in a large city in the southeastern United States in a newly constructed building in an industrial park. The company is engaged in the manufacture of industrial coatings and paints and has been in business a little over 12 years. It is a privately held company. Since the company is not publicly traded it does not publish an annual report. The company does have a favorable current ratio (debt-to-assets) that was even better prior to the construction of the new facilities. In the words of one of the owners, "our banker feels we are in good financial condition or they would not have loaned us the $2.1 million we needed to construct this new building". The company employs an annual average of 87 employees.

The second company is located in a rural, mountainous region of a state in the Southeastern United States. The company is located in an older building it has occupied for approximately eight years. The facilities are located on the outskirts of a small town and engages in the manufacture of furniture. The company has been in business for about 14 years. It is a privately-held company and meets the financial criteria for a successful small to mid-sized business. The enterprise employs an annual average of 149 employees.

The third company is located in a densely populated, coastal region of a state in the southeastern United States. The company is located in a modern building it has occupied for about five years and is engaged in the manufacture of commercial signs and components. It has been in business for just over 11 years and is privately held. The company employs an annual average of 128 employees.

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Data Collection and Analysis. Data were gathered in three ways. First, in-depth interviews were conducted with key managerial and non-managerial personnel. An interview guide was used which, according to Patton (1990, p. 283), "make[s] sure that basically the same information is obtained from a number of people by covering the same material. The interview guide provides topics or subject areas within which the interviewer is free to explore, probe, and ask questions that will elucidate and illuminate that particular subject." In this study the following topics or subject areas were covered in the interviews: the nature and extent of formal and informal HRD offerings (broadly defined); the view of HRD held by company management and employees; and how management and employees delineate the relationship between HRD and the company's success. All interviews were tape recorded and transcribed.

Data were also collected through several days of on-site observations including attendance at staff meetings and training sessions. Third, documents such as memos, letters, contractual agreements relevant to training were obtained and analyzed. Data from the interviews, observations, and documents were analyzed using Glaser and Strauss' (1967) constant comparative method of data analysis. Data were first analyzed for each case, called within-case analysis (Patton, 1990). Within-case analysis was followed by a cross-case analysis where data and findings of each case were compared with the other two. Such a procedure allows for patterns to emerge across cases (Miles & Huberman, 1994).

Findings

The findings of the research project reported elsewhere (Rowden, 1995) indicated that, in fact, the companies did conduct human resource development activities. Furthermore, that HRD activity contributed to the success of the three companies by a) supporting the unique market niche of the company through knowledge, skill, and attitude development, b) integrating the employees into the company's work practices, and c) enhancing the quality of worklife.

While the purpose of this study was to delineate the role of human resource development in three successful, small to mid-sized companies, more was learned about these companies than just what role HRD played in their success. What was learned also had to do with the companies' beliefs about their customers, their product, and their workers. In short, these companies involve their employees in decision-making, listened to them, and valued their knowledge. Specifically, they share a belief in their people as the primary source of competitive advantage; show a concern for employee well-being; believe that an investment in employee development yields a return; believe in meaningful employee involvement; maintain open communication channels; and provide proactive leadership and direction from the top.

Certainly one of the more important beliefs that each of these companies hold in common is that they truly believe in their people as *the primary source of competitive advantage* . Over and over, again statements were made such as, "without our people we are nothing", "our people are what make us great", and "we have some of the best people in the industry, period." It was apparent that this view was held not only by top management but it had been transmitted throughout the organization all the way to the line workers themselves. This belief in the importance of their people appears to be a major driving force in the organizations. The organizations feel it is important to train, develop, and educate their workers in order to maintain the unique market niche each has carved out. Without their people, the organizations feel that they would not be able to remain competitive in the market place.

Concern for the well-being of their employees seems to be another characteristic the organizations hold in common. Numerous situations were observed or reported that demonstrated the genuine concern for employee well-being. The paint company was willing to locate its new plant in an area that was more convenient for the majority of its workers even though it was one of the more expensive sites considered. All three companies freely allow their people to leave work to attend a child's play at school, or to handle pressing problems (they do like as much

advance notice as possible and the people usually are not paid). The investment of time, energy, and money in the safety training program at the companies are another strong indicator of the concern these companies hold for their workers. The companies do not view their workers as a commodity to be used but, truly, as a resource to be valued, nurtured, and developed. Interestingly, these companies had only moderately good benefits packages typical of small businesses. While they do provide basic benefits, their concern for the employee goes beyond extrinsic rewards. That's not to say that if a worker needed a small advance on their next paycheck they wouldn't get it--in each of the companies they probably would. But its more of the concept of "family" that delivers this message to the workers. Being small companies, they apparently are able to remain closer to the people and are in a better position to be aware of their needs. With the realization that their people are their primary source of competitive advantage, they are concerned with meeting the needs of their people and are sensitive to issues related to their well-being.

The fact that these companies believe that their *investments in the development of their people yield a return on that investment* seems apparent. Being small companies, they tend not to have very large operating budgets. When they do make an expenditure, it has to be a carefully thought-out decision. In other words, they simply cannot afford to spend money on training, development, or education unless they perceive that the net effect on the organization will be rather immediate. They will provide tuition assistance for an employee to attend computer classes so that the person can immediately come in and provide a needed operation. They will send a technician to a technical seminar because he or she can learn a new skill or technique that will improve operations or introduce a new product.

While safety training is a part of the concern for the well being of the employees, it is also seen as an investment that yields returns to the company. If, because a worker has been trained in the proper techniques of doing a job, he or she is able to avoid an injury that would otherwise cause them to miss time from work, the company feels it has received a high return on that investment. Because the jobs are specialized and the work force small, everyone is needed for their job. If safety training can help keep people on the job, the companies see a definite payback on the investment.

For these companies, *employee involvement* is not just a slogan or a "buzz" word, it is real. A lot probably has to do with their small size, but the concept of "family" also seems to play a big role. As the sales manager/founder of the paint company put it, "there's hardly a major decision made around here that we don't bring up before the people to talk about first. We don't pretend to have all the answers. [There are] some real sharp people out there;. . . .we need their input." During the observations at the companies it was not unusual to see a supervisor or manager go over to a subordinate and solicit input on a special problem or unique situation. One of the reasons the furniture company implemented the team concept in manufacturing was so that, through their team, the people would become more intimately involved in the decision-making processes.

Coupled with the meaningful employee involvement is *open communication channels*. In essence, the people in these organizations talk. Not only do they talk, they do so readily across divisions, levels, and functions. Their "power distance", as described by Hofstede (1980), appears to be very low. Power distance varies in the degree to which people in a hierarchical situation perceive greater or lesser desire to control each other's behavior. These leaders emphasize cooperation and communication among employees as the best means of solving problems and implementing solutions. This does not mean that they don't have a hierarchy or "chain of command"-one that is typically followed for routine matters. What it does mean is that anyone feels free to talk to anyone else about what needs to be done or how to do it. In this sense, these organizations are boundary-less and maintain very low "power distances."

Having open communications does not mean that the people in these organizations do not have occasional conflicts, it's just that when they do, they seem able to talk about it and work it out. For example, during one observation period at the sign company a strange occurrence was witnessed. A supervisor and a line worker left the work area and walked around to the back of the building and stood under a large tree. They talked, appearing to argue, for several minutes.

Afterwards, they returned to their work and seemed to have resolved things to mutual satisfaction. When pressed for an explanation, a division head explained that this was a process known there as "going out under the tree." He explained that any time anyone there had a problem that they wanted to discuss and did not want to be overheard or did not want an "official" record, they could invite the manager or even co-worker to "go out under the tree to talk." There everyone could feel free to "speak their mind" without fear of reprisal or of hurting anyone's feelings. The workers have an informal "guarantee" that anything said "out under the tree" will never be used against them. The other organizations do not employ such a formal procedure but, nonetheless, they still follow the concept of open communications.

Finally, each organization has a *proactive leadership and direction that begins at the top*. This seems to be due, in part to their size. The principals are more intimately involved in the operation of the company and play a large role in the direction the company takes. It can also be speculated that proactive leadership and direction is characteristic of the sort of person that will become involved in businesses of these types.

As an example, in the furniture company the woman that was the founder of the organization still is seen as the creative genius of the company. When she comes up with a new idea, she can still be seen down on the production floor trying it out, talking to the workers about how to get the results she wants, and she will come back once production begins to make sure that the project is still being carried out the way she envisioned it. At both the paint company and the sign company the men of the founding partnerships still operate as the principal sales person for the organization. This tends to keep then aware of the marketplace as well as any problems their product may be experiencing. This puts them in position to provide almost constant feedback to the organization--feedback that is used to lead and guide operations.

Conclusion

Contrary to popular belief, each of these companies invests heavily in developing its respective work force. Each company holds the belief that the company receives a benefit or return for developing its human resources. It stands to reason that if the company believes that its people are what makes it work and they have a genuine concern for the total well-being of that person, then it would logically follow that the company would want to invest heavily in the further development of these people and expect that investment to benefit the organization.

These companies tend to believe that if you have the people that make your company work, you show genuine concern for the whole person, and you invest in the development of that person, then surely you want to involve these people in what is going on in the organization. It would certainly be a waste of all this effort if the companies did not utilize all this talent it has selected and helped create. Once the organization has gone this far, it seems that the next logical step would be to listen to what these people have to say and provide them with a open mechanism whereby their input can be honored.

In summary, these companies value their employees, care for them as whole persons, are willing to invest in their development, allow them to be involved in the operations of the organization, and actually listen to what these valued employees have to say. Finally, they continue to provide proactive leadership and direction from the top of the organization affording everyone an enjoyable work place where they can utilize their talents.

A small business operating in an extremely competitive environment should emphasize service rather than price due to the higher relative costs of operation when compared to larger firms. These three companies believe that their ability to produce satisfied customers in their market niche is a direct result of employee satisfaction. Without satisfied, dedicated employees they would not be able to produce the quality products that give them a competitive advantage in the marketplace.

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Legal Issues in Human Resource Development

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As members of a field seeking professional recognition, HRD practitioners regularly raise questions regarding ethical and legal responsibilities as they define professional HRD practice. This paper describes three areas that were identified as having legal implications for human resource development with established legal precedent. Those areas are: employee participation committees; motivational or value based training; and intellectual property. Each issue is briefly described and a final table presents the issues in summary form.

HRD as an evolving field is still searching for professional definition. Meanwhile, legal issues impacting the field are being decided in the courts. Several writers have mentioned legal issues in relation to HRD (McLagen, 1989b; Nadler, 1967; Nadler & Nadler, 1989; Wiley, 1992), however, relatively few authors have dealt in depth with specific laws or legal decisions impacting the HRD practitioner. Of the authors that have addressed legal issues in relation to HRD, for example, Eyres, 1990, 1994 or Sample, 1993, legal issues have not been addressed by examining the perspective from which they evolved into a current legal issue, nor from the perspective of the long term impact on the field given the current the social and political climate in which HRD finds itself.

The study described in this paper sought to identify areas relating to the day to day practice of the HRD practitioner where legal precedent has been set. This study stopped short of legal analysis, but interpreted legal issues from the vantage point of the HRD scholar examining legal literature to incorporate it into the HRD canon in order to make assumptions about HRD practice and suggest guidelines for acceptable and unacceptable practice. It was hoped that identification of these areas would promote awareness among HRD practitioners of the increasing legalization faced by the field and lead to a proactive stance in defining the law as it relates to practice, as opposed to playing a reactive role allowing case law to define the practice of HRD.

Theoretical Framework

One of the earliest definitions of HRD appeared in the 1970 edition of *Developing Human Resources* by Nadler. Since that time, numerous definitions have appeared in print. During 1989 there were at least three publications in which definitions of HRD appeared (McLagan, 1989b; Nadler & Nadler, 1989; Watkins, 1989). While they differed as to the scope of HRD, all three definitions agreed that HRD includes facilitating learning in the workplace to improve organization effectiveness, and that one component of HRD is training and development in the workplace. Both the American Society for Training and Development (ASTD) definition, described in McLagan, and the definition appearing in Watkins, broadened the scope of HRD to include Organization Development and Career Development. Watkins broadened the definition further by stating that HRD includes the above areas, but is not limited to them.

Earlier, Chalofsky and Lincoln (1983) stated that HRD borrows from a number of fields and that these various fields overlap and contribute to HRD as a discipline. McLagen (1989a,b) identified HRD as a subset of the human resource discipline. Examined from that perspective, legal issues that are more commonly associated with the human resource discipline, such as Employment Law and Personnel Law may also impact HRD. Ledvinka (1982) examined regulation of human resource management from the perspective of the social and political factors that impacted the evolution of that field.

As a relatively young field, HRD is influenced not only by closely related fields, but also by the social and political climate that contribute to the development of the field. In searching for

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legal issues impacting HRD a number of legal issues with the potential for impacting HRD were theorized based on a preliminary search of the literature of closely related fields and HRD literature.

Research Question

Where has legal precedent in relationship to HRD been established?

Method and Procedure

Initially a cursory search of literature relating to the HRD field was performed. From the results of this search a preliminary list of potential legal issues related to HRD was developed.

The research question was approached from a historical perspective examining historical documents to locate legal decisions directly impacting the field of HRD. Materials used in the data collection process included legal documents, newspaper and journal articles, books, magazines and personal interviews. Database searches were performed during the period from 1989 through February 1995. These included general periodical databases, business and industry databases and covered journals, magazines and newspapers. In addition, the Bureau of National Affairs Human Resource Library on CD was searched. Once possible legal cases were identified, specific searches were made in Lexis or Westlaw for the case details. In addition, general searches were conducted in Lexis using key words. Search strategies were developed for each topic area.

In several instances, when additional information would help to clarify or confirm the available data, the individual most directly involved was contacted directly. For example, Patricia S. Eyres, the author of an article appearing in the September 1990 issue of *Training*, was contacted to clarify several points in the article. Likewise, Steven Hiatt, the plaintiff in the case *Hiatt vs. Walker Chevrolet*, discussed the events in the case in detail and reviewed the case description.

Legal Precedents Identified

During the course of the study four major areas in which established legal precedent relating to HRD were identified. They were: employee participation committees; motivational or value based training; intellectual property; and training issues related to employment law including safety, affirmative action, and equity of training. Three of those issues are briefly presented here.

Employee Participation Committees

HRD as a field has a history of using employee involvement as a tool to bring about organization change, whether it is through training, organization development or career development. The ability to involve employees in the design and implementation of long term organization strategies is one that is key to the day to day practice of HRD. Several recent decisions by the National Labor Relations Board (NLRB) have brought the legality of employee participation programs into question.

Brief Case Example: Electromation, Inc., April, 1990. Electromation, Inc., a nonunionized manufacturer of electrical components employing approximately 200 people, is located in Elkhart, Indiana. In 1988, Electromation was losing money and made some changes in its' attendance bonus system.

Electromation had been holding employee communication meetings since late 1987 and when they received complaints and a petition regarding the changes to the attendance bonus system, they scheduled an employee communications meeting. At that meeting additional areas of concern were identified. Electromation proposed that employee "Action Committees" be formed to analyze these issues and make recommendations to Management. The Action Committees were made up of both non-bargaining unit employees and salaried employees. Four of these Action Committees began meeting in early 1989. Approximately two weeks later, a petition for Union Recognition was filed along with a request for an election. Following receipt of the Union's petition for election, salaried employees ceased participation in the employee Action Committees at the direction of Electromation. On March 13, 1989, prior to the election, the Teamsters, Chauffeurs and Helpers Local Union 364 filed an unfair labor practice charge against Electromation. On March 31, 1989, the employees voted not to be represented by the Union.

On April 5, 1990, a decision was issued by the Administrative Law Judge, George F. McInerny who held that "the Action Committees constituted a labor organization within the meaning of Section 2 (5)...," and found that Electromation had dominated and assisted the committees. The Court reasoned that Electromation organized the committees, defined their nature and structure, and determined their functions. The Court further reasoned that, although Electromation management did not dominate meeting discussions, meetings took place on company property, supplies and materials were provided by management, and members were paid for time spent on committee work. (25-ca-19818 25-RC-8676, 1990).

Electromation, Appeal to NLRB, Decision Affirmed. December 16, 1992.

Electromation, Inc., Appeal to U.S. Seventh Circuit Court of Appeals, Decision Affirmed. September 15, 1994.

Employee Participation Committees and Implications for Legal Practice. *Electromation* and *DuPont* have received media attention (e.g., Robinson, Fink, & Gillenwater, 1993; Salwen, 1993) and stimulated discussion of exactly what constitutes legal practice under existing labor law (e.g., King, 1993; Oviatt, 1994).

Girard-di Carlo, Naidoff, & Hanlon (1992) suggest that two specific questions need to be answered to determine if an employee participation group falls within allowable guidelines. The first question concerns whether the group, under Section 2(5) of the NLRA meets the definition of a labor organization. In order to determine this, one needs to ask:

(1) Do employees participate in the group;

(2) Does the group deal with the employer, either in whole or in part; and

(3) If the group deals with the employer, does it concern "grievances, labor disputes, wages, rates of pay, hours of employment, or conditions of work" (p. 672.)?

Once these questions are answered, it must next be determined whether there is employer domination or interference in the administration of the committee or if the employer contributes support to the committee as specified under Section 8(a)(2) of the NLRA. Under this analytical framework, recommendations for HRD practice which conform to existing labor law can be categorized.

Currently there are both House and Senate bills pending that would amend the NLRA to allow the establishment and ongoing operation of employee involvement programs by both employers and employees. HRD practitioners will need to keep abreast of any changes in the NLRA or related decisions that directly impact their practice to ensure that the practice of the HRD practitioner conforms to existing labor laws.

Employee Motivation Programs.

In the eagerness to involve employees in a variety of participative management programs, employers have increasingly turned to training as a means to promote the participative process and encourage teamwork among workers. Many employers, in their drive to increase productivity and

join the quality movement, have come to view training as the means to change the fabric of their firms and create a new culture that embraces quality and productivity.

In their desire to remain competitive in our global economy, employers have chosen to use training methods that have been challenged in the courts. In particular, in an effort to find ways to both motivate and capture the "hidden potential" found in their employees, firms have embraced a variety of training methods, some of which have been found to violate religious freedom and individual employee rights.

Brief Case Example: Pacific Bell. This case, one of the more publicized, was never addressed by the courts. Pacific Bell was in the process of transitioning from a regulated telephone company following the breakup of AT & T in 1983 to a company who had to actively compete in the telecommunication marketplace. To operate in this competitive environment, Pacific Bell sought to change the culture of the organization. To promote change, Pacific Bell hired a team of consultants using material prepared by Charles Kroning. Kroning developed some of the materials in the Leadership Development (LD) program used at Pacific Bell. The Kroning materials were based, in part, on teachings by George Gurdjieff, who has been associated with "New Age" philosophies. The LD program was presented in a seminar format consisting of ten two-day sessions.

A number of Pacific Bell employees complained to the California Public Utilities Commission regarding this program and the required attendance. As a result of these complaints, the Commission conducted an investigation into the training practices used in the seminars (Lindsey, 1987; Brierton, 1992; California Public Utilities Commission Report on Pacific Bell's Leadership Development Program, 1987).

Participants felt that their values and beliefs were challenged and that their complaints were not heard. Employees then approached the Commission and newspaper reporters to voice their complaints. Despite the fact that this case was never addressed through legal channels, this case is cited in the Introduction of the EEOC Policy Guidance on 'New Age' Training programs which conflict with employees' religious beliefs, first issued in 1988.

The California Public Utilities Commission Report cited eight major findings arising out of their investigation. One of the findings related to the failure of Pacific Bell or the consultants to conduct an internal evaluation of employee response to the program (California, 1987).

Brief Case Example: Hiatt vs. Walker Chevrolet. In 1984, Steven Hiatt was employed by Walker Chevrolet in Tacoma, Washington. Hiatt had worked at Walker Chevrolet for nine and one-half years and as Walker's new car and truck Sales Manager he was considered a senior manager. Hiatt was consulted about the management of the business and felt free to suggest ideas and business procedures to the managers.

The two owners did not always get along well and with this in mind, Hiatt told them about a Lou Tice seminar, "New Age Thinking to Increase Dealership Profitability," offered through the Pacific Institute. Representatives of the Pacific Institute presented the program to Hiatt and the owners of Walker Chevrolet. and informed them that if they made a commitment to use the program, they and their wives had to participate in a five day training program. It was also stated that all employees of Walker Chevrolet would have to participate and that, if they refused, they should be considered undesirable employees and fired. Walker Chevrolet purchased the program.

Hiatt and his wife attended the seminar and for the first three days, actively participated. However, Hiatt stated that at dinner the third evening, he began to get concerned that the program was becoming spiritual; a concern reinforced by the type of music that was played as well as discussions about "life after death." In addition, the presenters stated that the program's real purpose was to "save the world" and that "they hated religion." This caused him to question the program and to examine what he had participated in over the last few days.

They were also told that not everyone that they would train would be ready for this information immediately. As facilitators of this program they would have to give people only the amount of information that they were ready for. They were told, "Make sure that people are on your team before you give them more."

Hiatt felt that the training that they were experiencing had all of the "traits of a cult, rather than sound business practice." Hiatt recalled that the atmosphere was very controlling and that

even in the small groups the seminar leaders had "plants" to ensure that the group went in the direction they wanted. Based on personal conflicts between the "training" that they were experiencing and his Christian religious beliefs, Hiatt and his wife left the seminar the next morning.

According to the record, Hiatt then proceeded to California where he was scheduled to attend a General Motors training course. At that point he called Walker Chevrolet and informed the owners of the conflict between his religious beliefs and the Lou Tice seminar. Returning to Tacoma, Hiatt requested a one week leave of absence, which Walker Chevrolet granted. However, during that week Hiatt was fired.

In 1984, Hiatt initially contacted the Human Rights Commission (Commission) in Tacoma, Washington. Hiatt was told that he would be allowed to file a grievance and that they would handle everything. Hiatt was also advised that despite the fact that this could very well be the "biggest case that their office had ever had," he did not need an attorney. The person assigned to Hiatt's case did not appear to be very sympathetic and seemed supportive of the type of training offered by the Pacific Institute.

Hiatt eventually contacted the person assigned by the Commission to handle his case, but this individual refused to meet with Hiatt without an attorney present. Hiatt then attempted to appeal to the EEOC. He received two form letters from the EEOC. Despite following the prescribed procedure, Hiatt was never contacted by the EEOC nor did they respond to his initial complaint. The statute of limitations was running out on Hiatt so, on February 20, 1987, he filed suit in the Superior Court of the State of Washington in and for the County of Pierce.

In November 1989, the Superior Court entered a summary judgment in favor of Walker Chevrolet. In 1992 the Court of Appeals reversed the trial court. Walker Chevrolet appealed and the Supreme Court of the State of Washington reversed the Court of Appeals and affirmed the Superior Court ruling in October 1992. Hiatt declined further appeal.

Employee Motivation Programs and Implications for Legal Practice. These cases illustrate how individual cases begin to become part of a body of legal decisions with long-term implications for HRD. As the facts show, these case were pursued through different channels. However, both cases are frequently cited in literature and the publicity generated by them and the tangential involvement of the EEOC in both cases may have provided some of the impetus for the issuance of the "EEOC Policy Guidance on 'New Age' Training programs which conflict with employee's religious beliefs."

The policy guidance issued by the EEOC was very clear on the responsibility of the "employer or the **sponsor** of a new age program." The policy guidance clearly states that "the issue of "new age" training programs can be resolved under the traditional Title VII theory of religious accommodation." It is important that HRD practitioners remember that there are other Federal anti-discrimination laws, such as Title VII, that may impact training design and course content. Areas that are protected under current federal law include discrimination based on sex, age, race, religion, ethnic background or handicap. As the area of employee motivation programs continues to evolve, HRD practitioners as a group need to maintain awareness of current litigation that will impact the field as a whole.

Intellectual Property

The HRD professional will need to be informed as to how this area of the law impacts their practice, as an employee, as an employer, and as an independent contractor. Human Resource Development, as it seeks to foster the longterm work related learning capacity at the individual, group and organizational level of the organization, deals in knowledge as an end product. The presentation and dissemination of that knowledge is the area in which intellectual property rights become an issue of legal concern for the practitioner.

Brief Case Example: Kepner-Tregoe, Inc. v. Carabio et. al. In 1977, two employees who had worked for Kepner-Tregoe, a management training firm, left Kepner-Tregoe to go into

business for themselves. The facts of the case reveal that they marketed services that were basically identical to those that they had offered as employees of Kepner-Tregoe. While they created additional materials, their original materials were developed using materials they had access to or had helped develop at Kepner-Tregoe. The Court in *Kepner-Tregoe* was very clear that it viewed competition as desirable and that the basic idea cannot be protected, but that the original expression of that idea can be. The Court further declared that a process (i.e. brainstorming, computer instruction, group lecture) is not something that can be protected, but that the expression of an idea (i.e. case study, course manual) is something that can be. The Court did however find that the case studies used by both parties were similar enough in two of the cases to be considered copies of Kepner-Tregoe's materials. Finally, the Court found that certain written materials violated copyrights held by Kepner-Tregoe.

Brief Case Example: Kepner-Tregoe, Inc. vs. Leadership Software, Inc. In 1972, Victor H. Vroom and Phillip W. Yetton, creators of the "Vroom-Yetton Model," granted Kepner-Tregoe an exclusive international license to the materials contained in their work along with an exclusive license to all future improvements and modifications on the original work. Vroom and Yetton retained the right to use the materials in teaching and private consultation. In 1989, Kepner-Tregoe made a final payment to Vroom and Yetton to buy out the license. Vroom began working with Arthur G. Jago on a revised model and a computer software program. In 1984, a revised model appeared in an article published by Vroom and Jago, "Leadership and Decision Making: A Revised Normative Model." In 1987, Vroom and Jago formed a Subchapter S Corporation, Leadership Software, Inc. (LSI) to market the computer software program, "Managing Participation in Organizations" (MPO). In 1990, when Kepner-Tregoe became aware of the activities of LSI, they filed suit against LSI alleging copyright infringement. In 1992, the court found copyright infringement and permanent injunctions were issued to disallow any future copying, producing, distributing, or selling of the MPO program by LSI and Jago or any future infringement of the copyright. In addition, LSI was required to pay profits from the sale of the MPO program to Kepner-Tregoe, with interest, and to pay attorney fees.

Intellectual Property and Implications for Legal Practice. The primary question that the practitioner needs to address is how will intellectual property statutes and laws affect my practice and what statutes will I need to be concerned with? These cases point out the need to fully understand copyright law and how it pertains to the practitioner's work. The latter case is a prime illustration of how the practitioner can inadvertently give up rights without being fully aware of what has been given up. To date, the HRD practitioner has primarily had to be concerned with copyright issues. While it is important for the practitioner to understand the basics of copyright laws as they relate to the use of another's works, questions of who owns the work I created and how do I protect that work will be increasingly important as the HRD practitioner operate in many arenas using a multitude of new technologies.

Conclusions

Table 1 summarizes the issues mentioned in the literature as having possible legal implications for the field of HRD. In two particular areas, alleged sexual discrimination related to training design and the area of patents, trademarks, and trade secrets, the literature did not reveal supporting documentation directly related to HRD. However, in the case of alleged sexual discrimination, a complaint was recently filed against the FAA with in the U.S. District Court in Chicago which should lead to a court ruling in this area. Also, in the area of intellectual property, specifically patents, there is a variety of current litigation relating to computer programs. While cases relating to HRD were not evident in the literature, legal precedent has been set in closely related fields.

Each issue discussed herein was substantiated as having legal implications for the field of HRD. Much of the litigation that HRD professionals will have to deal with in the future relates specifically to employment law. Human resource developers, as members of a profession that is closely related to the human resource profession, should not be surprised at this. Rather, the data

show that this is a natural trend. As human resource management has evolved to play a larger, more proactive role in organizations, that greater role has fostered greater legal headaches. So too has human resource development evolved and become exposed to greater legal headaches.

Table 1 - Summary of Issues

ISSUE	1 *	2	3	4	LAW; RULING; GUIDELINE	LEGAL PRACTICE
Employee Participation Committees	X			X	NLRA	Employers cannot deal directly with employees on bargainable issues
		X		X	NLRB Rulings; *Electromation; DuPont*	Employee Committees cannot deal with employers on bargainable issues
Employee Motivation Programs	X			X	Civil Rights Act of 1964 - Title VII;	Employer may not base employment related decisions on race, sex, religion, and/or national origin
		X		X	EEOC - *Decision 91-1*; Washington State Supreme Court - *Hiatt vs. Walker Chevrolet*	Employers may not require employees to participate in training programs which conflict with their religious beliefs
			X	X	Case filed in U.S. District Court in 1994 charging both religious and sexual discrimination in the training context	Employers may not require employees to participate in training programs which conflict with Title VII protections
Intellectual Property	X			X	Copyright - Title 17 U.S. Code	Owner of copyright protected in respect to reproduction, distribution. adaptation,, performance and display of the work
		X		X	*Kepner-Tregoe, Inc. v. Carabio; Kepner-Tregoe, Inc. vs. Leadership Software, Inc.*	Original materials owner by employer; knowledge of copyright laws protects ownership and assignability of copyright.
			X	X	Patents - Title 35 U.S. Code Trademarks - Lanham Act of 1946 Trade Secrets - Uniform Trade Secrets Act	Computer programs developed and/or used by HRD practitioners may be covered by patent law. Seek appropriate permission for use.

* 1= Law or regulation directly impacting HRD; 2= Court ruling or interpretation directly impacting HRD; 3= Guideline for practice in closely related field; 4=Mentioned in print as likely legal issue

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Developing an Infrastructure for Individual and Organizational Change: Transfer of Learning from an Action Reflection Learning™ Program

ARL™ Inquiry[1]

Transfer of learning gains is a key issue for individual and organizational change. We report findings from a study of a management development intervention called Action Reflection Learning™: the learning that takes place within the program, and the extent to which learning is transferred after the program. This program design involves work in small teams on real, strategic business problems. While the program develops an infrastructure supportive of individual and organizational change, the larger organizational context still greatly influences transfer success.

Transfer of learning gains to the workplace has been a constant struggle in the field of HRD (Medsker & Roberts, 1992). Learning strategies that embed real problems into the training design purport to circumvent some of these difficulties because learning occurs *in* the workplace rather than *outside* of it. In other words, as participants face an actual challenge, they are able to recognize and deal with the contextual realities that often make transfer of training difficult when the examples on which participants practice are simplified for the sake of ease of learning new knowledge, skills, and attitudes. Moreover, when real challenges are the focus of the learning, participants must engage other members of the workplace in resolving issues, and must encounter and deal with policies, practices, or systems that otherwise make transfer of training difficult.

In this paper we examine individual learning gains from an Action Reflection Learning™ program, a management development approach that designs learning around real-world challenges, and the extent to which learning has been transferred to the workplace. We start with a brief description of Action Reflection Learning™ (ARL™) and the program being researched, followed by a discussion of the research methodology. We then describe findings that elucidate the following questions:

- What kind of learning takes place within this program ?
- To what extent does that learning transfer back to the workplace?

We conclude with a discussion of insights gained about the value added that might or might not be gained from this kind of a program with respect to developing an infrastructure for individual and organizational change.

Definitions and Context

Detailed definitions and descriptions of Action Reflection Learning™ can be found elsewhere (e.g. O'Neil and Marsick, 1994; Marsick and Cederholm, 1988), as is also the case for definitions and descriptions of Action Learning, of which ARL™ is a variant (e.g. McGill and Beaty, 1992; Pedler, 1992; Revans, 1982). A definition of Action Learning from McGill and Beaty (1992) that we used last year in the AHRD proceedings (ARL™ Inquiry, 1995) captures its essence:

> Action learning is a continuous process of learning and reflection, supported by colleagues, with an intention of getting things done. Through action learning individuals learn with and from each other by working on real problems and reflecting on their own experiences. The process helps us to take an active stance toward life and helps to overcome the tendency to think, feel and be passive toward the pressures of life. (p. 17)

Action Reflection Learning™ is aligned with this definition. The Institute for Leadership in

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[1] ARL™ Inquiry is a research group affiliated with Leadership in International Management Ltd. Lyle Yorks, Eastern Connecticut State University; Victoria J. Marsick, Teachers College, Columbia University; and Judy O'Neil, Adjunct, Teachers College, Columbia University took leadership for this article based on data that were collected by Lyle Yorks and that were jointly analyzed with Glen Nilson, Eastern Connecticut State University, and Robert Kolodny, Adjunct, New School for Social Research.

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International Management (LIM) and its sister agency, Management Institute in Lund, Sweden (MiL) have developed some specialized approaches that emphasize facilitated critical reflection and large systems organizational change. ARL™ programs are also typically designed so that a team works together on a common problem, whereas in Action Learning, individuals often work in peer groups on each person's individual challenge.

In a typical ARL™ program, four to five small teams each address a strategically driven business question as the core focus of the program. Teams meet separately to work on their projects, as well as together for whole community activities, during four, one week residential sessions held over a six to nine month period. Pre-scheduled workshops on topics related to an overarching program theme are also part of the program offering. In between scheduled sessions, managers go back to their normal routines, although they are responsible for continuing work on their project teams in between each of the residential sessions.

Each team is assigned a Project Team Advisor (PTA) to facilitate the learning of the team and its members. PTAs work with a Program Director to design the program, and to continually adjust it based on emerging issues being faced within the teams. In addition, just-in-time learning sessions are held with teams or as an entire community. Insofar as possible, PTAs are role models. They illustrate new behaviors that the organization wants managers to adopt. There is no one way in which leaders function who learn through the Action Reflection Learning™ process. However, an early study of the kind of behaviors that managers in MiL programs took back to their work (Marsick in Marsick and Watkins, 1990) suggests that by and large, the process itself instills behaviors that are compatible with participatory management, empowerment of employees, and the leader as coach. Managers learn the value of considering group process along with task behaviors, of listening to their employees and valuing diverse perspectives, of continually raising fresh questions that expand their viewpoints, and of taking the time to learn from successes and mistakes.

The PTA models reflective learning, which is at times "critical" in that deep questions are asked about underlying assumptions that cause people to make quick, habitual judgments about a situation. Sometimes, their judgments are correct; but often, given the complexity of the situation, they need to seek fresh insight. In Action Reflection Learning™ programs, complex problems are continually reinterpreted and reformulated based on newly gathered information that is processed collaboratively by the team. Based on new insights, teams begin to take action to address what they think to be the problem. This yields new data, and a fresh cycle of reinterpretation. The underlying theory behind this iterative cycle is action research as formulated by Kurt Lewin.

The ARL Program Being Studied

This paper reports findings derived from a study conducted in a multi-national food products company striving to transform itself into a global organization with a single profit-and-loss-statement mentality. We use the pseudonym Integrated Foods for the company in this paper. Making this change required going from a divisionalized product structure to a globalized, mixed functional structure. At the time when the company's C.E.O. began sharing this vision with his executive committee, the walls between the various operating divisions were virtually impermeable. These divisions were comprised of companies with their own brand names and were steeped in their own deep traditions, and their own national and organizational cultures. Additionally, there was a compelling need for significant executive development to realize a global vision. A survey conducted by a company-wide organization development task force had gathered data suggesting that a significant management skill gap existed in the organization. Seven dimensions were most prominent in the data. These became the program's focus, and are discussed below vis-a-vis what managers learned through the program.

Management initiated an extensive ARL™ program to develop these competencies. Three programs were carried out, each of which lasted over a period of six months and consisted of twenty top-level managers. The design followed the pattern described above. Each of the four meetings in any given program was held in a different country in order to emphasize the global nature of the program's objectives. Project teams were also global in composition. Each problem assigned to a team was sponsored by a member of the company's executive committee. Each team had to provide a recommendation for its project, that had been in some way partially tested for

implementation, at the end of the fourth residential week. This recommendation was made in a presentation to the entire program community and the executive committee.

Methodology

Our research began with the second program and continued with the third program. This was a field study involving triangulation of four methods of data gathering. First, extensive field notes were gathered by a participant observer over the course of these two programs. These notes were based on observation and interaction with participants and staff. Second, seventy-one formal interviews were conducted throughout the company. These interviews included participants in the three ARL™ programs, managers and individual contributors throughout the organization who did not attend the program, and three members of the executive team. Interviews were guided by a prepared interview schedule and were audio-taped and transcribed. Third, a pre-test/post-test statistical analysis was done on the 360 degree feedback data that was gathered as part of the program. Both a chi square and repeated measures t-test analysis were performed with the data from the 360 degree feedback. Finally, various products from the ARL™ programs are being analyzed, such as participant evaluations of the sessions.

The analysis reported in this paper is based primarily on observation and interview data. An inductive analysis is being carried out on the data by a team of five researchers. This team has met regularly throughout the research process: first to debrief the participant observer at various stages of the data gathering process, and later, to code the data and begin to build theory from the analysis. This analysis is part of a larger research program that is seeking to develop a broader theory of action learning within organizations.

Findings: What kind of Learning Takes Place in the Program?

The remainder of this paper discusses findings about the nature and extent of learning, and its transfer to the workplace. We begin by discussing learning within the program. We look first at what was learned vis-a-vis content objectives—the seven management skill areas identified as critical to achieve the company's goals. In so doing, we also consider the less explicit process capacities that are modeled by the program staff in their interactions with teams.

The seven management skills around which the program was designed included developing (1) a global perspective, (2) interpersonal communications, (3) teamwork, (4) trust, (5) conflict management, (6) leadership, and (7) innovation and change. Analysis of data thus far suggests that a major outcome of the program is a dramatic shift toward considering Integrated Foods as a global company, rather than as a collection of semi-autonomous divisions. Innovation and change, the seventh item, are harder to capture in the short run. Individuals and teams have taken innovative steps as they pursued project solutions, and have adopted many new behaviors and strategies throughout the program. The true test of innovation and change capacity, however, is longer term, and thus we believe, harder to measure with respect to what was learned within the program. The bulk of our discussion in this section focuses on the remaining five management skills, which cluster synchronously and seem to bear a strong relationship to the design of the program, that is facilitated learning teams who are working on real strategic issues.

Global Perspective By far the most visible learning has been the emergence of a global perspective and the emergence of a network of executives around the world who are willing and eager to work together. A participant from the first program captured the learning of many participants throughout the program when he pointed out that through the program he learned "not just what other people did, but . . . that we were part of the same organization. Integrated Foods, I don't think, really existed except in the minds of several executives" prior to the program's inception. It is doubtful that a less intensive experience would have accomplished the same thing. Intensity was achieved, in part, because participants worked on highly visible strategic issues, and everyone in the company, including the executive committee, was keeping an eye on how projects were being handled. One manager characterized the experience as follows:

> It's the idea of a shared adversity creating a bond between people . . . certainly all of us have a more intimate relationship in the business sense with one another. . . . That kind of intimacy, I guess it's based on trust, you're more open and more direct . . . . The ability to

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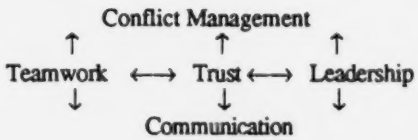
> pick up the phone to talk to someone you haven't talked to in six months . . . . you are immediately at a higher level of communication than you would be if it was just a person you happen to know on a functional basis throughout the organization.

This same manager then described the way in which people in his facility extended assistance to a group from another division working on a project, and pointed out that this would never have happened before the program: "We provided a lot of assistance to them, knowing full well that this doesn't benefit the profit and loss statement of *my* business unit. It's an *Integrated Foods* project."

Synchronous Learning Cluster The five remaining dimensions form what seem to be a cluster of interdependent behaviors that develop synchronously. See Figure 1.

Figure 1. Synchronous Learning Cluster[2]



Within each team one can observe critical exchanges of dialogue that move the team forward in its development both as a task oriented unit and a learning unit. These critical exchanges suggest evidence of an interrelated cluster of these dimensions, although in any given exchange, some elements might be more latent than others. An example is found during the first week of one of the programs in which a contest over *leadership* emerged between two of the most senior people in the team during the first few days of work. One of the contestants for leadership said to the other, "I am uncomfortable . . . . you are leading, but not marshaling us in a direction," to which another, considerably more junior member of the group said, "I think he's doing what *you* want to do." This same speaker had earlier commented that the group did not use any of the tools they were learning to manage *teamwork*, and hence, that he did not think the group was functioning well together. This dialogue also shows that *conflict* can be brought out and examined in ARL™ teams. In this group, leadership had to be earned, not delegated based on seniority as would often be the case in Integrated Foods. So that everyone could develop leadership skills, members rotated this role among themselves. However, members learned that leadership comes by *communicating* one's thoughts within the group in order to ensure that issues were not conveniently skirted or decisions made with too much haste.

Groups learned sensitivity to *group process* issues, even though their process often broke down in practice, forcing them to deal with the consequences and often take a step backward in order to learn. For example, early in the second week of the program, one team was struggling over both task and leadership issues. At one point, a member pointed out that another kept referring to needs as if they were personal rather than *teamwork* issues. He continued: "I think we have team needs. I think you need it as much as me." The team initiated a reflection and dialogue process and were very frank and listened to one another in order to *manage the conflict:*

> First Person: We are in a struggle. Making false assumptions. I've communicated my needs and it just plops. I feel a lot of pressure that I am the one holding up the group.
>
> Second Person: We are not making a lot of progress. Not addressing each other's needs. . . I feel a tension in myself . . . that we will have a million things to do.

Teams learned that groups must be continually nurtured. As one participant noted, "in regard to forming, storming, norming, we are doing all of those things at different times depending on what we are working on." He pointed out that "*Communication* is the glue that keeps us together." The group recognized that despite task pressures, they needed to manage process, and codified a phrase to remind themselves of this—"panic slowly."

Another team had a major *conflict* at midnight, two nights before its final presentation to the executive committee in the last week of the program. They went to bed, returned the next morning, and completely reorganized their presentation. One member commented, "It's the

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[2]Lyle Yorks originally identified this cluster when preparing findings for feedback to the executive team of Integrated Foods.

maturity of the group. Nothing was taken personally. We got up the next morning and said, 'let's get going.'" Another member of this team pointed out that without conflict, "you get nothing—passive behavior," which led to suppressed differences of opinion. This team learned that they could successfully surface and resolve conflicts.

Conflict was often managed in this way. One strategy in ARL™ that facilitates the surfacing of different points of view and their management is what has come to be known as the "stop-write it-reflect," opportunities for everyone to periodically stop and take time to gather his/her thoughts, often in writing, and to then publicly let others know what each is thinking. They can then examine implications for participants, the team, or the organization. This technique helped resolve conflict constructively in one team that was being pulled in two different directions by different leaders in the group. A team member recalls what happened when a third member of the group suggested this strategy:

> Stop-write it-reflect . . . (was) sort of mind shattering. . . . We were going through a number of discussions where X and I and a couple of the others were really at odds, that we just couldn't see each others' point of view. We finally did stop, and we wrote each thing down . . . And when we wrote it down, they were almost identical. The way I was expressing it (to him), the way I was hearing (him), it was just totally reversed. . . . by taking that little bit of time to actually understand the other person's viewpoint, we took a leapfrog as to where we were going.

Trust was a fundamental part of this process. Members had to assess how much they could trust one another to both deliver on assignments and to accept and respond to feedback in the group. Members of one team, who were spread geographically, for example, found that they had to "trust that people would do" his or her assignment. They were pleased when "We all came with it done."

Transfer of Learning During the Program A feature that is unique to ARL™ because participants meet periodically over six months is that they try out what they are learning back on the job. They often encounter the kind of resistance they might otherwise encounter after a training program, but they still have time to bring their stories back to colleagues and staff for support and assistance. In the Integrated Foods program, such try-outs were especially striking between the third and fourth weeks of the program.[3] Some try-outs were successful; others reflect a desire for feedback to determine whether or not to continue the behavior:

- One participant attempted to become more involved in resolving conflict with his subordinates. During a reflection-and-dialogue session,[4] he reported that his subordinates "were uneasy—they disliked my change in style."
- Another asked: "What do you do with people who have not been through the program—dealing with the threat to others when you change?"
- A third participant pointed out that during a meeting, he asked his staff to write down and reflect on their ideas for an upcoming project. In the past he would have simply described what he wanted. What emerged was a "group idea different from mine. I don't know where it came from. . . . Nobody has time, (but) everybody found time to work on this idea. They said it could be done by the end of the year."

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[3]The ARL™ Inquiry team hypothesizes that there may be a natural progression over the four weeks of the program in the focus of learning which could contribute to the timing of such examples. In the first week, participants are becoming oriented to the program. Their focus is generally on their own individual learning. By the second week, as the teams grapple with their projects, the spotlight is more on the team's learning. In the third week, participants receive feedback about themselves from others in the organization in the form of a 360 degree assessment instrument. This heightens their consciousness of the back home environment. In the fourth week, participants look forward to next steps, and as such, typically focus increasingly on systems learning within the program's learning community, as well as within the organization where they will no longer enjoy the formal support provided by the program.

[4]Reflection -and-dialogue sessions in the ARL™ program are modeled after the work being done by Bill Isaacs (1993) with this concept. Participants sit in a circle and surface their thoughts, but no one is allowed to respond to points raised or discuss them in the usual way during this time period. The purpose of these sessions is to uncover thinking that otherwise might be unavailable to others in the group.

- Another participant spoke more consciously of delegating responsibility, and asked a subordinate to make an important call to an important customer who was "in the market."
- Another manager "had a meeting between manufacturing and technology. There was the possibility of conflict. I started the meeting by asking everyone to give their expectations for the meeting. I was afraid no one would speak up, but they all did."

Comments such as these begin to reflect the issues these participants will deal with as they try to transfer their learning to begin organizational change.

Findings: Transfer of Learning to the Workplace after the ARL™ Program

Transfer of learning after the program was examined through interviews with participants, as well as subordinates, peers, and others with whom they interact to determine whether people noticed changes in behavior and/or capacity.

Interviews suggest that the extent of transfer of new knowledge and behavior, as well as practices learned in the program, varies greatly. First, Integrated Foods has locations around the world. Participants who came from offices where only a few members participated in the program commented on the fact that, while they might have changed their outlook and capacity, they could not as easily implement the new behaviors and skills they had learned. In such cases, work on real projects had not extended sufficiently to their own workplace locations, nor was a critical mass of people developed who could easily support one another in taking on new practices. In other cases, a critical mass did participate from the same area, and/or the projects were closer to home. In addition, several offices implemented spin-off activities modeled after the principles of the ARL™ program that reinforced new learnings and spread ideas and practices more quickly to others below the top management level.[5]

About 80% of the people interviewed in two areas of the organization in which a significant number of managers had participated in the program could see some changes in individual managerial styles. The range of change described reached from "significant changes" in some cases to "some change," with the weight of opinion at the latter end of the scale. People were most likely to note change in their own bosses, but not necessarily see it in others, especially managers who were a level or two above them. Interviewees noticed both individual changes as well as "some consensus about how to handle, how to act . . . some cohesion between people who went to the program." However, comments also suggest that while managers did try out new skills, they were also as likely to slip back into old behaviors without the support of the program or other kinds of reinforcement. One interviewee who works closely with several of the graduates estimated "it might be fifty-fifty. . . . I'm not saying that they are at the same level as before but they are slipping away a little bit." The same interviewee also noted that the program had "a tremendous impact on the way they know they can behave. They will never forget that." Another interviewee pointed out, "if you want to change the business, people have to think differently. This training goes very deep. He (a participant in the second program) looked at people differently for a time. . . . As we get started (on the organization's restructuring), it will come back to him."

Transfer is strongest between peers, and upward, in part because the program has touched more managers at the senior levels, or at best, the middle levels.[6] Even then, interview comments reinforce the fact that, while changes occur, not everyone can see them, nor are they uniformly sustained. A group of comments about the same team reflect this uneven quality. One member of an executive team at the division level commented:

Well, (our) executive group has now all gone . . . and we had a number of meetings which

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[5]Spin off activities included, for example, a local ARL™ program facilitated largely by participants who graduated from the parent program along with some outside PTAs, a one-week version of the program for managers at less senior levels, and regional meetings that were designed around real problems and that incorporated some of the practices encouraged in ARL™ programs such as stop-and-reflect sessions or reflection-and-dialogue sessions.

[6]Several interviewees commented on this as a weakness of the program's impact. The bulk of people on the shop floor had little contact, if any, with these changes except in a few instances, where a local program had been held using these design principles.

> are still not run necessarily in a positive meeting sense, that everybody contributes the way they should, but if you looked at it, we would have had say, two years ago, meetings where people were being broached on a subject that they felt uncomfortable with, they would become much more defensive than they are now, to the point where you either would have . . . I wouldn't call it name calling but things going off the subject . . . . (Now) I think we tend to be more focused on trying to get the job resolved without focusing on personal differences or personal injury.

Another member of that same team commented positively on the same team, as follows:

> I used to have the feeling in our meetings that comments I made about (matters outside my function) went by others without any listening or consideration. Now we take each other's input seriously. That, to me, is a fundamental shift in how we run our company.

Simultaneously, another person on this team observed that "we've never set up our team norms and we continue to function as traditional teams do in all organizations . . . we're not really functioning as a real team." A person who works for this latter individual observes this ambivalence, as well, in his boss: "sometimes he is more open than in the past, more reflective . . . other times, you don't see the change."

While comments suggest uneven transfer of learning, many interviewees note changes in behaviors and practices in those who participated in the program. One interviewee's comment is not unlike others in the data collected:

> If you have a meeting (with people from the program), there is a difference. They become better listeners. They also take some time to have some reflection. . . . They take a step back. They evaluate what was said. . . . There is better understanding in a number of people. . . . In the beginning it was very difficult to say 'let's have some reflection; others say let him have his fun, then go on with the meeting. . . . Now the number of people who know reflection is growing.

Most frequently mentioned are behaviors around sharing information (which was seldom done before), an openness to the opinions of others, higher level of reflection and ability to listen to others, and encouragement of dialogue from and with staff.

Discussion: Developing an Infrastructure for Individual and Organizational Change

The ARL™ program has had an impact on Integrated Foods in a number of different ways. Savings have already been realized from some of the project recommendations, and the company is also being restructured along global lines based on project team results. In another paper for this conference, we separately examine the impact of the program on change in the organization's culture. To conclude this paper, we discuss implications of our findings for the way in which transfer of learning does or does not assist participants to develop an infrastructure for individual and organizational change.

Earlier in this paper, we suggested that, ideally, a program such as ARL™—in which real workplace issues are embedded in its design—might be more conducive to transfer of learning because difficulties that are normally postponed and dealt with in isolation can surface and be examined as part of the training program. The data from this study, while limited, suggest that transfer is easier in cases where participants can bring more of their workplace reality to the program—in terms of the issues addressed, the socio-cultural-political context, and support through a critical mass of colleagues. However, there are many constraints to the design of these programs that also militate against transfer of learning outcomes.

We suggest that the power of the ARL™ design lies in the extent of engagement in the work of the project teams, and a participant's willingness to become involved in new approaches that embody reflection and experimentation.[7] Many participants did transfer skills back to their home environment, although data also suggest that the degree of effort varied. Some

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[7]Lyle Yorks suggests that participants fall into three groups based on their adaptive posture: (1) those who embrace the program with tentative trust and an openness toward experiencing it on its own terms; (2) those who adopt a posture of "constructive distancing" who learn selectively and experience the program on their own terms; and (3) those who "manage" the experience by adopting a personal script that permits them to explain themselves to others in a way they hope is publicly acceptable, but who limit the extent of their engagement.

participants—either by dint of personality, power of position, or support of a critical mass—began practicing new behaviors before they left the program and continued after the program was completed, although "slippage" did occur. Relationships with others helped. As one participant in the third program said, "one of my people came back from the teambuilding workshop and I saw him using the skills with me. This was helpful, I felt supported." By holding three programs, a network was built to offset the isolation of being one of a few anointed to go through the program. However, interviews suggest that, unless graduates worked close to one another, contact among graduates of different programs was not extensive.

Interviewees also commented on the usual retardants to change. The culture of the company, while acted upon by project teams, also had an identity of its own that had endured for generations and that was not easily shifted. There was a need to change reward systems to support the global design and cooperation among departments and sites. The press of other work and overcommitments made it difficult to live up to one's espoused beliefs.

One of the most significant impacts has been on the Integrated Foods executive team itself. In the first program, the contrast between the old and new ways of managing was most evident at the end of the program. The senior executive team entered in their roles as clients. They immediately began interrupting and acting in ways that were not consistent with good interpersonal process. This was clearly evident to the participants in the program. One of the participants commented: "we'd learned all these techniques—dialogue, listening skills—and we got the senior executives together and they had a meeting and they just basically argued with each other." The participants immediately brought this to the executive team's attention. This led the executive team to examine the way in which members functioned together. Their examination led to some significant changes. Participants in the program confronted the disjunctures immediately with the executive committee, and they in turn, did not deny, explode, threaten, or use the power that comes with their position to protect themselves. Their example has provided a strong message to sustain momentum toward increased transfer of learning outcomes in the future.

In conclusion, we suggest that a program that brings workplace issues into its design does hold more potential for effective transfer of learning, but it is not enough on its own. It is clear that this ARL™ program could only provide a platform for moving an organization forward. In fact, there is danger in claiming too much credit for any one program or effort. Success comes through an integrated learning and organizational change intervention.

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Using Organizational Learning in an Action Research Intervention to Maintain Critical Technical Knowledge and Skills

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This paper reports on an organizational diagnosis and action research intervention that was guided by a model of organizational learning. The specific problem that was addressed was the identification, storage and dissemination of scarce skills and knowledge of NASA engineers. Strategies created to address the results of the diagnosis included strengthening systems around dialogue and information sharing, strategies to create new knowledge in the technical and social realms and mechanisms to increase the number and types of storage bins for expert information.

Introduction

Learning is a critical competency of the 1990s (Senge, 1990). It is almost a cliché to speak about the nature of the global competitive environment, the pace of changing technology and the development of a skilled workforce. Internal characteristics of organizations that facilitate learning ahead of competitors are now considered as or more important to maintaining advantage than just product, brand or economic strategies (Kiernan 1993; Ulrich & Lake, 1991). Learning, innovation and adaptation are equal strategic objectives along with traditional goals such as achieving efficiency in operations and managing risk. This thought is echoed by many organizational theorists who point out that the ability to acquire and use collective knowledge is central to competitive advantage (Nonaka & Takeuchi, 1995; Hamel & Prahald, 1994; Doz & Prahalad, 1992; Senge, 1990). Conscious attention to developing mechanisms for organizational learning are crucial "meta-strategies" in today's environment.

Problem Statement and Purpose

Although organizational learning is considered a major competency, there is still a short supply of techniques that address how the principles of organizational learning can be used to intervene and guide change in organizations (Doz & Prahalad, 1993). The contribution of the present paper is to help bridge the gap between theory and practice in organizational learning. It reports on an action research intervention that illuminates the interplay between theory and practice in organizational learning. It also provides the consequences of the effort from both the theoretical and practical organizational perspectives.

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Theoretical Framework

Organizational Learning Although there are many definitions of organizational learning (e.g., Huber, 1991; Fiol & Lyles, 1985; Argyris & Schon, 1978), we selected Duncan & Weiss's (1979, p, 84) definition: " organizational learning is defined as the process by which knowledge about action outcome relationships between the organization and its environment is developed". We adopted this definition because it targets the organizational level and because it views learning as an ongoing process that involves interpretation and adaptation. We also made several assumptions about the nature of organizational learning. The first is that it is more than the sum of individual learning. Although individuals are the carriers and enable learning in organizations, there is a collective level of knowledge that is more than just adding up everything that everyone knows (Dodgson, 1993). The second assumption was that organizational learning is affected by and affects contextual factors such as strategy, structure and culture (Lundberg, 1989). Finally, we adopted a perspective that organizational learning contains a component that is interpretative in nature and that understanding action outcome relationships involve collective interpretation (Schwandt, 1993, 1995; Huber, 1991; Shiristava, 1985).

Schwandt Organizational Learning Model The action research intervention was based on Schwandt's (1993, 1995) model of organizational learning. The model adopts a sociotechnical perspective because it addresses both the social and behavioral patterns in the organization as well as technical systems (Davis & Trist, 1974). This model is also consistent with, as well as modifies and extends, other researchers' classification of the organizational learning literature and constructs (e.g., Dixon, 1992. Huber, 1991; Shiristava, 1985).

The model conceptualizes organizational learning as a system that contains four elements that must be healthy if it is to survive and function. The first, **environmental interface**, gathers and filters information from the environment. Through a variety of mechanisms and from a number of sources, the organization collects data about trends in the environment and other information in order to ensure adaptation. Data collection can be either passive or active, processed extensively or relatively unfiltered.

The second element, **action reflection**, acts as an interpretative mechanism to evaluate and make decisions about organizational actions and their consequences in relation to goals and objectives. Processes such as dialogue, debate, deliberation, critical reflection and formal decision making serve to transform data into valued knowledge about an action's usefulness in achieving organizational goals.

The third element, **structuring**, transfers information and knowledge through out the organization. The element operates through formal and informal acts to share information and integrate knowledge and action. These include formal methods such as newsletters and policies as well as informal mechanisms such as rumors and grapevines.

The final element, **meaning and memory**, is the controlling component of the learning system as well as an operating component like the other three. This element stores information through a variety of mechanisms including people, culture, structures and ecology (Walsh & Ungson, 1991). In this way this element helps to ensure stability in thinking and action. It also can facilitate learning because stored experience may be used to address action in the current situation. On the other hand, this element may serve to inhibit learning because it also contains underlying and often unconscious assumptions that may not be functional in the current situation (Schein, 1991). These may include assumptions about the characteristics of the environment to those that focus on the nature of employees.

All four elements in the model are dynamic and have a continuous and interactive effect on one another. This interaction occurs through a set of outputs for each element. For example, the environmental interface's output is new information that is a result of data gathering and filtering activities. The output from action/reflection is goal referenced knowledge. The output from structuring is structuration includes a dynamic combination of organizational structures, policies, roles, responsibilities and processes that result from dynamic social interactions. Finally, the output from memory and meaning is sensemaking.

Using the model as a guide for qualitative analysis can illuminate the fitness of each organizational learning element, uncover the dominance of one over another or identify an over-reliance on certain strategies. In turn, because each element contains a variety of concrete activities, crafting an intervention is not difficult. The remaining sections of this paper describe how this model was used in an organizational diagnosis and intervention.

Research Questions

The case described is an action research intervention designed to address a specific problem. As a result, the research questions were generally formulated around problem statements. The project, however, did address the following issues in the field of organizational learning: 1) Can a sociotechncial model of organizational learning be used as a diagnostic tool? 2) Can a sociotechnical model of organizational learning be used to prescribe an intervention that impacts collective learning? 3) What are the elements and characteristics of this intervention? and 4) What are the consequences?

Research Site

The project took place at one of the National Aeronautics and Space Administration's (NASA) Center's Engineering Directorates. This organization is tasked with the design, development and operation of satellites and their instruments. These are used by NASA, university professors and other research institutions to conduct basic and applied science in space. The Engineering Directorate's workforce is made up of engineers, scientists and computer scientists. The management structure is lean and most work is accomplished through the collaboration of these individuals.

The age distribution of the workforce in the Engineering Directorate could be characterized as bi-modal. There were a number of people hired in the late 1960's and again in the late 1980's. There are few employees who in the middle of their career. Most are either thinking about retirement or just beginning their career. As a result, the leaders in the Engineering Directorate were concerned that the loss of the more experienced individuals would leave a void that could impact the development of future systems.

The goals of the Engineering Directorate were to: 1) capture and transfer to younger employees' scarce knowledge and skill; 2) develop ways to maintain knowledge and skills apart from experts; 3) create a culture of learning among experts and younger employees; and 4) create a culture where ongoing debate, discussion and inquiry about technical methods was encouraged.

Methodology

A qualitative methodology was used to gather the type of robust data that was necessary to obtain the rich information required by the model, but also required by the action orientation of the project. It was used to craft the intervention described later in this paper.

Data Collection To initiate the process, a set of interview questions were developed to assess the current status of each of the four elements of the organization's learning system. Individual interviews were conducted with technical experts as well as selected members of management. Small group interviews were held with younger employees in specific departments. Interviews were targeted in functional areas that had been identified by a recent project audit as having deficits in the knowledge and skill level necessary to perform on future engineering projects. The results of this assessment not only served to guide our diagnosis and interventions but also provided a baseline to assess change.

Data analysis Responses to these and other questions were collated and analyzed. Themes were extracted and documented. These were shared with and validated by participants from the focus groups and interviews. Additionally, they were shown to management for validation.

Results

The themes that emerged in the environmental interface element appeared healthy. Active information gathering about knowledge and skill needs, new technologies and their application appeared to be at a level that was satisfactory to management, technical experts and other employees. The problem, however, seemed to be the lack of dissemination, evaluation and sharing of this information and knowledge. Therefore, it was not surprising that the results showed that the action/reflection, structuring and memory and meaning elements of the organization's needed attention.

Problem areas in action/reflection centered on a lack of mechanisms for senior technical experts and younger engineers and scientists to systematically evaluate the utility of technical approaches. In memory and meaning, issues focused on problems related to cultural inhibitors associated with inadequate access by young employees to expert knowledge and skills. Specifically, it appeared that most knowledge and organizational memory about technical approaches was stored with specific individuals. Because of a culture that produced minimal interaction between senior experts and younger employees and the non-routine nature of the information, exposure to this knowledge was limited. There was also an apparent resistance by senior experts to documenting organizational memory in accessible forms such as manuals, training courses or expert system databases. Most agreed that you "couldn't just write this information down, you had to experience it". Finally, the structuring element was also targeted for improvement. In fact, most younger employees stated that they felt that they lacked an appreciation about the total approach to the engineering process in the Directorate. This, as well as specific technical expertise had never been systematically shared. Communication had been limited due to the small amount of informal and formal interaction with other departments, management and, most importantly, senior technical experts.

Intervention

Based on these results, we designed a series of interventions to: 1) increase the number of storage bins where critical knowledge resided and move from an over-reliance on senior experts to a more even approach that included younger employees, databases, manuals, processes and structures that facilitated wide spread storage of critical information; 2) establish a set of mechanisms to facilitate the ongoing sharing of critical knowledge and skills between senior experts and younger employees and between younger employees themselves; and 3) develop a culture that supports opportunities for and skill in dialogue, debate and critical reflection about the feasibility of technical approaches, given specific situations. Specifics of the intervention will be described using each element as an organizing framework.

Memory and Meaning To begin to provide the younger employees an overall context to assimilate expert knowledge, we began the intervention by conducting a workshop with senior experts and younger employees to make explicit the overall systems engineering process for each technical discipline and to identify the critical areas for knowledge storage and dissemination. We hoped to begin a process that would develop a collective schema among younger employees and senior experts and would also facilitate and exchange and integration of expert information and strategies (Lord & Foti, 1986; Walsh and Ungson, 1991).

For the workshop, participants were organized into functional teams. Each team included a senior technical expert, four to five younger employees and the manager of the workgroup. These teams were selected based on the manpower assessment described earlier. To begin to develop shared schemas for the entire engineering process, each senior expert was asked to

articulate their representation (there was no overall Directorate level process) of the engineering development process using mapping techniques such as data flow diagramming, hierarchical input-output diagrams, decision network diagrams, Warnier-Orr diagrams and others. The younger employees participated in this exercise by asking questions and evaluating the maps in terms of their utility back on the job. Encouraging discussion and dialogue about the maps served to promote a common understanding of organizational actions and more distributed storage of expert information (Huber, 1991; Poole, Gray & Gioia, 1990).

Following the creation of expert maps, each team was asked to come to consensus on which part(s) of the map were critical to success of a typical engineering project. These "critical lever points" then became the focus for subsequent activities focused on information storage and sharing. Following the workshop, participants met again in a series of facilitated sessions to refine the information around the technical map and each lever point. Additionally, each team was also asked to develop a set of recommendations for storing information about the entire process as well as the specific, critical lever points. Recommendations were guided by a set of criteria that considered areas such as the frequency of use of the information, complexity and ability to standardize the technical approach.

Strategies developed for storing organizational memory ranged from the development of expert systems that would assist in conducting stress analysis for expendable launch vehicle vibration to a series of lessons learned video tapes on the problems encountered with instrument development. The recommendation for an ongoing series of information sharing and technical problem solving meetings with a large audience was popular among the younger employees and adopted by most teams.

Structuring Dissemination of knowledge is also necessary for increasing organizational memory (Huber, 1991). As a result, each team developed a plan for dissemination and diffusion of technical information. It included formal and informal methods designed to transfer information from the senior technical experts to younger employees as well as methods for exchanging information among the younger employees and with other organizational units.

There were a number of formal strategies adopted by the teams. They included electronic bulletin boards that would be updated monthly focused on new techniques, lessons learned, and other important technical information. Many teams opted for institutionalizing a series of "brown bag" meetings once a month to discuss technical problems and issues among themselves and with senior experts. These were advertised across Departments to maximize exposure and information exchange. Other teams selected more standard approaches including training and documentation of procedures and processes. One team used a combination of methods and instituted a formal lessons learned program that made technical information available to other teams as it came on line through a combination of lunch meetings, electronic bulletin boards, training and memos. Finally, one team instituted a program where senior experts and younger employees came together on a ongoing basis to hear about current technologies outlined in journal articles or at conferences.

Action/Reflection Questioning underlying assumptions and unlearning are critical to the knowledge production that is essential for organizational learning (Argyris, 1992; Hedberg, 1981). Uncovering unproductive knowledge and questioning unconscious assumptions, however, are not easily learned tasks. In the Engineering Directorate, although senior knowledge was critical for success, it also had the risk of becoming unproductive and outdated (Levinthal & March, 1993). To address this, we incorporated into each team activities designed to teach skills in critical inquiry as well as set up a culture that supported evaluation and debate about established technical methods.

To accomplish this we borrowed from Argyris' (1992) work on questioning assumptions and defensive cycles. This included having team members construct hypothetical situations where they might want to question assumptions and agreeing on how they would do this and how they would handle the potential consequences and outcomes. Teams agreed to practice norms consistent with dialogue such as suspending evaluation, no personal attacks on ideas and other habits such as bringing outsiders in for critical review points (Brooks, 1994; Marsick & Watkins, 1993). We also taught team members techniques such as devil's advocate decisionmaking and the dialectical method (Cosler & Schwenk, 1990).

Outcomes

To evaluate the effort, there was a formal six month status review at the Directorate level as well as monthly team updates during technical review meetings. At six months, we interviewed each team in three areas: 1) whether or not they had engaged in the activities they planned; 2) whether or not they thought they were making progress; and 3) barriers or issues in implementation.

Results of the interviews showed that 9 out of the 12 teams had been making progress toward achieving their plans. The teams that were most active seemed to have younger employees that took a vigorous role in the process including scheduling meetings and ensuring that technical experts were available. Teams that focused on less formal activities such as "brown bag" lunches and development of guidebooks and procedure manuals seemed to make more progress than teams that had planned to develop more formal and complicated processes such an expert systems or databases.

Of the 9 teams that were active in the first six months, 8 considered the activity a success. Many of the younger employees stated that they felt better prepared to take on technical activities that only a few months ago they considered the domain of senior experts. They also reported a perceived increase in dialogue in team meetings that questioned established assumptions about doing business. They also reported an enhanced awareness of where to find technical information independent of personally asking a senior expert. Management also reported that during the latest review of manpower projections for new projects, there appeared to be a greater number of employees that they considered ready to assume critical technical roles than just months before.

The most common barrier reported was the amount of time that senior experts were willing to devote to team activities. Younger employees, however, were eager to address these issues and willing to work after hours on this effort. A second barrier was that senior experts tended to view the problem as training related and not associated with organizational culture. The third barrier, mentioned earlier, was a lack of dedicated resources for this activity.

Summary

This project demonstrated that an organizational learning model can be useful in organizational diagnosis as well as in designing and intervention to produce change. Organization learning theories and models, in this case, provided a structured way to conceptualize organizational issues as well as define remedies. Finally, an initial set of outcome measures support that the set of activities in this intervention had, at least on a qualitative level, outcomes that were perceived a successful. In the future, a more defined evaluation piece at the end of the effort would allowus to examine and quantify the evidence for change. Currently, however, the state of theory and models in organizational learning does not lend easily to quantitative evaluation. This case may also lead us to develop research propositions that could be tested in similar contexts.

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Organizational Learning As Culture Construction

ARL™INQUIRY[1]

Changing an organization is generally understood to involve changing that organization's culture. However, the social processes involved in the dynamics of culture change have received less formal attention. This paper reports a theoretical model derived from field study data of an intervention performed with a multi-national corporation attempting to develop globalization.

This paper reports observations and analysis of culture change processes resulting from an Action Reflection Learning™ (ARL™) program. Specifically, we examine the social processes by which change in the organization's culture is developed and learned.

ARL is a form of action learning developed by Leadership in International Management Ltd. (LIM) involving groups working on challenging tasks, or problems, and experiencing learning through facilitated reflective practice. In a typical ARL program small teams focus on strategically driven business questions. The teams meet during four, one week residential sessions held over a six to nine month period. During these week-long sessions the members of the four teams also meet periodically as a total community. During these community meetings participants engage in various learning activities. They also participate in reflection and dialogue sessions. In addition to the four residential sessions, teams schedule working time between program meetings as needed for project work. The program staff are called Project Team Advisors (PTA's). The PTA's work with the Program Director overseeing the program to design the process and with the teams to facilitate learning through reflection and dialogue, and providing just-in-time learning experiences for the entire program community. (A more complete description of Action Reflection Learning practice can be found in Marsick & Cederholm, 1988.)

The ARL™ Program Being Studied

The study being reported here is taking place in a large, multi-national divisional company that is using ARL as means of developing managers to transform itself into a global network organization. Management has determined that to remain competitive the company must function as a global organization, mirroring what is happening to many of its large customers. A 1992 corporate culture survey identified seven areas that needed to be addressed in order to enhance the ability of the organization to perform effectively as a global organization beyond the development of a one global profit and loss statement mentality: 1) teamwork, 2) employee development, 3) trust, 4) leadership, 5) communications, 6) conflict management, and 7) innovation and change. Three ARL programs were scheduled to be held, each comprised of twenty senior level managers selected from various parts of the world wide organization. These twenty participants were divided into four project teams. Each team worked on a project of strategic importance to the

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[1]ARL™ Inquiry is a research group affiliated with Leadership in International Management Ltd. All authors are members of ARL™ Inquiry. Glenn Nilson, Eastern Connecticut State University, took leadership in formulating the theory and preparing this paper from data gathered by Lyle Yorks, Eastern Connecticut State University, who served as field observer, and jointly analyzed by members of the ARL™ Inquiry research group include in alphabetical order: Robert Kolodny, Adjuct, New School for Social Research; Victoria J. Marsick, Teachers College, Columbia University; Judy O'Neil, Adjunct, Teachers College, Columbia University.

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organization that was sponsored by a member of the company's Executive Committee. The teams had to provide a recommendation for its project at the end of the fourth residential week of its program. This recommendation was made in a presentation to the entire program community and the Executive Committee. The residential weeks were held at locations in North America, Europe, and Asia.

These ARL programs have generated spin-offs that have contributed to the results being reported here. For example, the impact of the first ARL program on the President of one of the European Divisions was so strong that he initiated a local program. This local program focused on fostering collaboration between functional managers in the Division and involved more people with ARL learning methods. On the recommendation of the quality project team from the first ARL program, team building skill programs, utilizing an ARL design have been held for people lower in the organization. The Vice Presidents of the American Divison, all of whom participated in one of the first two ARL programs, suggested to their Division President that the methods learned from the ARL programs be used in the annual division meeting. This meeting consequently become much more focused on initiating efforts toward addressing certain strategic challenges facing the Division.

Problem Statement and Theoretical Framework

Culture is typically conceived as a system of shared meanings, values and behavioral expectations. In organizations, culture has often been treated as a managerial product that can be introduced, cascaded, and diffused, resulting in whatever system of values and behaviors is desired. Schein (1985) regards culture manipulation as the prime responsibility of management. Deal & Kennedy (1982, p.193) assert that successful managers of the future will be "...heroes who can forge the values and beliefs..." of the organization.

This paper takes a slightly less deterministic approach and views culture change as more socially constructed than simply managerially determined. Culture derives from the collective interpretation and designation of events which symbolize important (and sometimes emergent) values, perspectives, and roles (Fine,1979). The generation and evolution of culture is inherently social.

> Cultures cannot be produced by individuals acting alone. They originate as individuals interact with one another. Individuals may originate specific ways of managing the fundamental insecurities of life, but until these specific ways come to be collectively accepted and put into practice they are not part of a culture. (Trice & Beyer, 1993, p.5)

An organization's culture is its means of mitigating against uncertainty and a means to "...channel people's actions so that most of the time they repeat apparently successful patterns of behavior..."(Trice & Beyer, 1993, p.2). Thus an organization's culture is as much a response of its members to situations encountered, including managerial behavior, as it is a product of managerial attempts to direct the behavior of members. The point here is that rather than viewing organizational change as necessarily determined by management and successfully, or unsuccessfully diffused throughout the organization, we take the position that organizational culture is a product of the interaction of members of the organization at all levels, and that any change process is not simply linear and unidirectional. To understand intentional organizational change from this perspective, it is necessary to examine the dynamics of interaction that produce, or change, an organization's culture, and to look at intervention strategies and attempts in that regard.

This approach does not preclude the important role of leadership, or management, in the construction or change of culture, but it gives more weight to the significance of what (Argysis & Schon, 1978) refer to as theories in practice over espoused theories. That is, culture is not

simply something that is handed down and insisted upon by management, but rather it includes the social meanings and significance of given orders, actions and events by the members of the organization, and emerges through the participants' on-going interaction.

We believe that in a stable context, culture is the taken-for-granted meanings and meta-meanings, together with shared values and behavioral expectations, which provide a basis for individuals to meet problems and take actions individually while remaining socially coordinated. In a changing, or unstable context, social behavior attempts to construct a shared definition of the situation which will again enable individuals to orient their behavior collectively.

From this perspective, there are important questions to be asked when an organization undertakes a program to intentionally bring about cultural change. How do the objectives of the program become incorporated into the organization's culture as an altered set of taken-for-granted values, beliefs and assumptions? How do behaviors which are exhibited in the context of program become part of the day-to-day behavior in the larger organization?

Methodology

The data reported in this paper were gathered through a participant observation design. A field researcher traveled with two of the three programs and had access to all the activities that took place. Overt participation in the program by the observer was minimal. (A more complete description of the observer's role has been presented in ARL Inquiry, 1995.) Extensive field notes were taken throughout the two programs observed. Many "opportunistic interviews"-- discussion with participants --were held. Seventy-one formal interviews were conducted throughout the company. These interviews included participants in all three programs, managers and individual contributors throughout the organization who did not attend the program but who work for those who did attend, and three members of the executive team.

Throughout the field research, the field worker met regularly with the ARL™Inquiry research team to review the data being gathered and discuss next steps. Following the close of the final program, the team began coding data and inductively building theory. The model presented below was developed by Nilson as part of this theory building process.

Components of Cultural Change

Analysis of the available data suggest four components of culture change. The first, *Exhibitng*, is when new behaviors, values, and attitudes, which reflect participation in the intervention, appear in the everyday work behavior of the organization's members. The second component, *Symbolizing*, occurs when events and behaviors are given meaning and made communicable among organization members. The third component, *Sanctioning*, means that members receive peer, and possibly organizational, support and reinforcement for exhibiting these attitudes, values, behaviors. The fourth component, *Reinforcing and Refining*, refers to individuals reviewing and refining the new values and behaviors within a group or network of change participants. These four process components--Exhibiting, Defining, Sanctioning, and Reinforcing and Refining--are presented as a theoretical model pertaining to the incorporation of change into an organization's culture by way of the social interaction of its members.

Exhibiting The first change component, *Exhibiting*, is that desired new behaviors become known and accepted among members of the organization. The intervention under study consisted of an executive training program that would utilize ARL to develop interaction skills and values in addition to globalization. Therefore, it was necessary to look for evidence of both globalization and these new interaction skills and perspectives. One early indication of globalization occuring outside of the intervention setting came when a marketing and communication task force began organizing joint presentations for industrial trade shows, replacing previous practices of individual company competition. Another is reflected in changes in interpersonal communication following

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participation in the intervention experience. Consider the following comments made by a participant in the program and typical of many such comments.

> When you go through (the intervention) its the idea of a shared adversity creating a bond between people...certainly all of us have a more intimate relationship in the business sense with each other...That kind of intimacy, I guess it's based on trust, you're more open and more direct, and has great benefits in communicatron with the organization. The ability to pick up the phone to talk to someone you haven't talked to in six months...you are immediately at a higher level of communication than you would be if it was just a person you happen to know on a functional basis through the organization...I've seen and experienced the benefits of that...and there's a lot of people who were involved in a project and came out to our facility. It would have never have happened if there hadn't been communication, if it had just been between managers. We provided a lot of assistance to them, knowing full well that this doesn't benefit the profit and loss statement of my business unit. It's a (global organization) project.

The respondent's comments illustrated what we conclude about the level of trust and interpersonal knowledge gained as a result of participating in the intervention. This gain influenced the subsequent likelihood of interaction taking place between different members and companies within this organization. Other individuals who were not a part of the intervention directly have started participating in events in which they cross organizational boundaries that they would not have previously crossed. Most importantly, we learn that this changed behavior is not driven by previously existing values and norms, ie. potential for profit to one's own company, but by the introduction of a new way of defining these events as global organization events.

As a result of participating in the intervention, people began viewing direct interpersonal comunication and cooperation between members of the various operating companies as behavior that now defines the way members of the organization handle problems and conduct business. Their behavior exhibited these changed values. That members recognized this behavior change is reflected in the following interview which is illustrative of comments from members of the organization in all parts of the company.

> I guess the biggest impact I've seen has been the fact that we definitely seem to have become one company...(prior to the intervention)...trying to get information...was difficult....I've seen 100%improvement, and it's even better than probably 100%. ...like if I have a problem or question that someone they know... in (a different part of the company) has a solution to that, I don't see any barriers to me being able to call that person up and getting that information. Two years ago, it didn't happen. We tried and you couldn't do it.

To some extent, globalization, as a perspective, meant interacting and cooperating across boundaries that had traditionally separated departments, divisions, companies, and individuals. Cooperation across traditional boundaries was exhibited and recognized as a new corporate value. This cooperation was repeatedly mentioned in interviews, such as the comment reported below:

> A lot of the underlying themes (in the program) were teamwork and trust and building relationships and re-defining the organization from a departmental mode where you're narrowly focused on how that department performs versus how the overall (profit and loss) is affected. That was another theme. And I think all those themes apply to the company whether you look at it globally or locally.

Symbolizing The second culture change component is that new behaviors, attitudes and values are given meaning and made communicable among these members. There are two ways in which this might be expected to be found. Members of an organization might develop their own jargon in reference to the intervention, or some aspect of it, or they might begin using terms that they learned as a part of the intervention for behaviors being brought into the everyday workplace. During early observations of the second program the observer noted participants initially making comments about having seen participants from the first program return appearing

to have been through some sort of almost religious conversion experience. This way of putting it seemed to express participants' skepticism and conservative fears that personal changes would be expected by them by the program staff. In effect, they were defining the intervention as a threat to the existing culture. However, further into the intervention, the field observer's recorded notes report one of the interviewees who was particularly supportive of the program using the spiritual conversion jargon to symbolize his own position. He said he"...felt (like a) born-again Christian"

It was interesting to observe that such references to spiritual conversion died out and did not reappear in subsequent programs, and that there was less expression of doubt or fear about the nature or expected benefits to be derived by participating in the intervention, although resistence still existed on the part of some participants. Adoption of the principles of the intervention grew and changed, as did the ways in which organizational members defined and symbolized the event.

Symbols that were carried directly from the intervention experience and were used to communicate the intervention-based values and practices came mostly from techniques introduced in the intervention. One interviewee commented that "...It's generated a bit of a language that has helped...recognize situations."

One of the techniques taught in the intervention was called "Reflection and Dialogue", or, as it is commonly referred to in the company, "R&D". This technique was often discussed or referred to by interviewees like the one below:

> R&D. It's a means of getting expectations out on the table in a non-judgmental way. I had a meeting with my financial team, and I said, before we start, I want to get expectations, what are everybody's expectations...

Sanctioning The third culture change component is that members give and receive mutual support and reinforcement for exhibiting the new cultural behaviors. In the following situation, described in an interview, a technique taught in the program called "Stop-and-reflect" was invoked by a senior executive.

> I was... meeting with (a member of the executive committee). I got a little excited, he got a little excited. And then he said, "Oh, let's do a stop and reflect. Let's take five minutes right now, where we are here. I thought, that's neat. ...Came back in, five minutes later...and found that there really wasn't as many issues as we thought there were and we got to some closure pretty quickly. He never would have done that a year before.

Support can come from modeling a desired behavior, as well as from making positive comments about it, or sharing in an event in which the new behavior is used and the event is recognized as having gone better than previously. Support through modeling is particularly important when it comes from superiors, and, since the participants in the ARL programs were high-level executives, their use of new behaviors can be assumed to carry a generally supportive effect for those working under them. In one surprise episode, sanctioning emerged because of what participants considered inappropriate old culture behavior. During the presentation of recommendations at the conclusion of the first program the members of the Executive Committee were confronted for their behavior by program participants, and subsequently gave support to these new norms themselves. As the event was described by one participant:

> I'm sitting around that circle when this event happened and it was just like...somebody farting loudly in church. It was such inappropriate behavior, and then I thought, boy, I guess my consciousness has been changed, because I wouldn't have noticed this six months ago. ...(W)e had a group of twenty people who are really sensitive of how the other person felt, how they talked, listening. All this kind of stuff and they brought these bulls back into the china shop and they went back to the old, duke-it-out-at-the, across the boardroom kind of crap and it just offended everybody.

As a result of the above incident, the senior executives made it clear that they wanted to learn what new behavioral norms were now in place themselves, and one of the senior executives immediately sanctioned a local version of the program in his operating company.

In another interview, a respondent reported his own changed feelings and behaviors as

a sanctioning interpretation of the organization's new activities.

> I feel more comfortable expressing myself among my superiors in particular than I used to. And I guess part of my source of strength or confidence in doing that is being able to look back at the (program) and say, "Look, this is what the company said they wanted to do, and if they're really serious about it, then they're not going to think I'm coming out of left field when I say these things."

This respondent also reported observations of changes in the behaviors of other executives who went through the intervention, and gave some recognition of a conscious effort to model, and thus sanction, the new desired behaviors.

> Individuals I think have changed. I've seen VP's here, I can mention names since it's you and I talking... (a VP) has done a really good job of taking to heart the teachings of the program. In trying to, in becoming a more sensitive manager, I think (another VP) has some good work and things like that. I'm more outspoken and I'm more myself within the company.

Reinforcing and Refining The fourth culture change component is that individuals who share the behaviors and their social meanings review and refine them within a group or network of change participants. The importance of this sharing is reflected in the following comments made in interviews that are illustrative of numerous such statements made by others.

> I think [as] more and more people get involved with the (ARL program) it makes a difference. In the beginning it was very difficult to say, "Let's have some reflection." Now the number of people who know reflection is growing.

> ...there are informal groups formed because of the local (program)...people sit together with the finance guy and the production guy and say that this is not the way it should go and let's do something about it. We sit together and try to define some sort of strategy because going one step higher doesn't make any sense. That is not where the change is coming from. You might say to the level above that group that there wasn't any change coming or it was delayed or postponed or you have to wait, etc., etc. So now some things are moving and because there are more people involved the groups are getting bigger and there is more disciples within the organization who have the same ideas and same feelings.

The importance of this component is also seen in observations by participants' reflecting its absence. The following comment is by a participant who embraced the program but worked in a location remote from other participants:

> You know, I really haven't done very much of that (reflection and dialogue with my people)... I don't know whether I have a hesitation to do it simply because of the fact that I was the only person there who could do it.

Conclusions

The organizational cultural change observed in this company resulted from an ARL program that offered high-level executives the opportunity of learning through experience. The overt thrust of this program was to generate globalism as a part of the organization's culture. Additional thrusts of the program focused on creating an environment in which participating executives could learn behaviors and perspectives that would foster and utilize trust, cooperativeness and communication among the various companies making up this multi-national organization. Although our analysis is still in the initial stages, we conclude that the impact of the program on participants was generally positive and at times dramatic. However, the cultural change took time to start and spread.

Initial reactions were hesitant, and met with skepticism in the larger organization. Participants in the first program were defined as having experienced a religous-like conversion. However, as

additional programs were implemented, participation was redefined positively. Participants began modeling the techniques they had learned, and exhibiting the changed values they had acquired as a result of the intervention experience. These changed attitudes and behaviors were symbolized by reference to named events and techniques, providing a special language to share and diffuse the intervention change into the existing culture. The diffusion of the change was reinforced by opportunities to discuss and use the new attitudes and behaviors among those who shared experience of participation in the program and common language it fostered. Acceptance of the change was further reinforced by the modeling and sanctioning of change behaviors on the part of others, especially management. Additional events patterned after the original program further exhibited and sanctioned the change, possibly tailoring the changes to the felt needs of the organizational participants sponsoring and participating in them. The dynamics of change drawn from the observational and interview data are expressed as four culture change components: exhibiting; symbolizing; sanctioning; and, reinforcing and refining. This model is summarized in table 1.

Implications

Results of this study indicate that new values and behaviors are introduced into the organization by individuals who can model and communicate the desired changes in existing everyday situations. Furthermore, the utility and efficacy of such practices is weighed and communicated as part of the social change process.

Several implications from these observations seem evident. The desired change should be readily communicable. This may suggest the popularity, and success, of training programs which incorporate easy-to-phrase, remember, and communicate principles. At the same time, it is important not to overlook the ability of participants in a training intervention to arrive at suitable means of constructing, naming and communicating new principles in ways best suited to their own organization.

TABLE 1. Culture Change Model Showing Change Components And Effects

COMPONENT	DEFINITION	EFFECTS
EXHIBITING	Introducing new values & behaviors into everyday practices	Diffuses learned perspectives and behaviors into existing cultural context
SYMBOLIZING	Naming and defining new values & behaviors in terms of organizational implications and acceptance	Makes communication of new values and behaviors, together with their organizational significance, feasible
SANCTIONING	Modeling of new values & behaviors by organizational leaders and members, and attributing positive results to their use	Incorporates new culture components within the reward structure of the organization
REINFORCING and REFINING	Repeated expression and use of new values & behaviors, with possible modification to fit the organization's needs	Maintains and furthers accepted use of components, and uniquely adapts them to the organization

Second, the desired change must be usable within the context of everyday work situations, and its appropriateness and reward must be demonstrated and made frequent. The proving ground for an intervention is in the everyday workplace and within everyday interaction, not aside from it. Training programs often end at the close of the formal sessions, but results of this study indicate that, while personal change may take place within the sessions, organizational change takes place outside of them. Interventions intended to result in cultural change need to be designed such that the desired changes can take place in actual everyday practice and within the social context of everyday behavior.

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A Study of the Role of Learning Advisors in Action Learning

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Learning advisors play a crucial role in helping individuals learn through Action Learning. This study searches out the inherent wisdom of practitioners to better understand what learning advisors do and why they do it. This paper reports on the first phase of that research in which some of the external and internal influences on a learning advisor are examined.

In order to deal with an environment of change and uncertainty, individuals and organizations have begun to experiment with forms of working and organizing that call for a fundamental reassessment of the role of learning. One of the keys to successfully dealing with continuous change is the ability to learn how to learn from, and during, experience (Senge, 1990; Watkins & Marsick, 1993). Action Learning (AL) is a process that can be used to help individuals acquire these new learning skills.

This paper reports on the first phase of an ongoing research project that is examining the role of the learning advisor in AL programs. I will first describe AL and the role of the learning advisor as conceived from the literature. I will next discuss the research itself and the methodology being used, and then report on the results of the study of the external and internal influences on the role of the learning advisor.

Action Learning and the Role of the Learning Advisor

AL originates from the work of Reg Revans (1982) and is defined by Pedler as:

> "... an approach to the development of people in organizations which takes the task as the vehicle for learning. It is based on the premise that there is no learning without action and no sober and deliberate action without learning. ... Action Learning implies both self-development and organization development. Action on a problem changes both the problem and the person acting upon it. It proceeds particularly by questioning taken-for-granted knowledge" (1991, p. xxii-xxiii).

The design of an AL program takes many shapes (Noel & Charan, 1988; O'Neil & Marsick, 1994; Pedler, 1991). AL may be used within an organization to address individual or organizational problems and, in some cases, to help bring about organizational change. It may be used within a university setting to enable individuals to earn degrees through research, investigation and action on individual or organizational issues. AL is also used in community settings to address individual and societal issues. Programs vary in design, i.e., the number of groups, the number of days groups meet together, the duration of the program, and the integration of formal and informal instruction.

In each case, participants work in small groups on a problem of importance to themselves as individuals, or of strategic importance to their organization. In some groups, each individual addresses his/her own problem - either personal or organizational; while in other groups, the group as a whole addresses the same problem originating either from their own organization or, in some cases, another organization. During their work on the problem, individuals learn how to learn, learn to think critically, and develop their own theories of working and living that are tested against real world experience and established tenets (Marsick and others, 1992). In this process, participants are assisted by a learning advisor.

The role of the learning advisor is considered important and central to AL by many authors (Casey, 1991; Marsick, 1990; MacNamara and Weekes, 1982; McGill & Beaty, 1992; Mumford, 1993). There is some disagreement as to whether or not the learning advisor is always required. Revans (1991) thinks that the learning advisor role may be limited to the start of the

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program to ensure that participants understand that they have the latent ability to learn from one another, but that the ongoing support of the advisor is unnecessary. Most AL practitioners, however, see the role as both necessary and appropriate.

According to the literature, the learning advisor plays many roles (Casey, 1991; Harries, 1991; Marsick, 1990; Marsick & Watkins, 1990; McGill & Beaty, 1992; O'Neil & Marsick, 1994; Pedler, 1991). These roles can include that of a supporter, a teacher, a reflector, a challenger, a questioner and a mirror of the group's values, expectations, norms and beliefs. What roles are played, and when, and how, these roles are played out is the subject of this research.

Research and Methodology

The current literature on the role of the learning advisor is primarily presented as prescriptions, written from the personal experience of practitioners (Casey, 1991; McGill and Beaty, 1992; Mumford, 1993; Pedler, 1991). The problem is that we don't have any documented wisdom of practitioners to help us better understand what learning advisors do and why they do it; what learning advisors say they do and what they actually do; and what they think is distinctive about their role in helping individuals learn how to learn.

This study looks to build on the literature by identifying themes from the work and words of practitioners, and from those themes begin to develop principles and theories that will be useful in practice. This paper reports on the first phase of this research that looks at the external and internal influences that help to shape what the learning advisor does.

This is a modified phenomenological study that triangulates the results of interviews and observations. The subjects include 25 practicing AL learning advisors in the United States, Sweden and England. The observation sites are a multi-national food organization in the United States using an AL program to help transform itself into a global organization; and a university in England using AL as a basis for its masters and doctoral programs geared to people working within varied organizational settings. I have performed a deductive analysis of what these experts explicitly say about their practice, along with an inductive analysis of the interviews and observations, to begin to identify implicit themes.

External and Internal Influences on Learning Advisors

In this first phase of the research, I have looked at those forces that appear to begin to shape the roles that the learning advisor plays in an AL program, and some of the ways in which learning advisors start to attribute meaning to those roles. These external and internal influences indicate possible differentiators in the way different learning advisors practice.

External Influences Some of the external factors that appear to influence the roles of a learning advisor in a particular program, and the way in which those roles may be practiced, starts with a consideration of the background and earlier work of the advisor. Other factors include the external (to the program) pressures of the environment in which the program is being run, i.e., organization, university, community; and the design of the program itself. The last factor to be discussed is the needs and attitudes of the participants in the program.

Background and Early Work The literature indicates that learning advisors come from varied backgrounds (Casey, 1991; Harries, 1991; Pedler, 1991; Turner, Lotz and Cederholm, 1993) and findings from the research confirm that observation. There are certain areas, however, that appear in advisors' backgrounds with a degree of frequency. The most named experience is with training, and/or work with groups.

"They obviously have to be interested in groups and how groups behave."

" ... experience in group and interpersonal skills ... managing group process ... ."

Advisors frequently cite Tavistock experience, National Training Laboratory and Gestalt training as being influential in their current work. This earlier background of working with groups has an obvious connection with the group design in AL. Some of the advisors have also indicated that they find the work with groups in AL a more meaningful way of working since they go "below the process level, to the learning level".

A second background area that comes up with regularity and helps shape the way the advisor practices is an interest in systems theory.

> "I use a systems model when I work."
>
> "I have a combination of psychoanalysis and systems theory. ... I tend to think in systems and look upon the AL group as a system and then do systems interventions. ... I use the triangle to try to help them focus on each other in relationship to each other and the system and the topic."

The frequency of advisors with systems theory in their background may tie in with the aspect of using AL to help individuals and organizations learn to deal with constant change. Senge (1991) makes the point that systemic thinking is needed to understand change, so a background in systems theory would appear to be useful to an AL learning advisor.

External Pressures in the Environment The 2 environments the learning advisors were most familiar with were organizations and universities. It was within organizational settings that advisors appeared to most often encounter pressures that impacted how they practiced. Both the literature (McGill & Beaty, 1992; Pedler, 1991), and the learning advisors suggest that AL works best when the participants are able to meet regularly over an extended period of time. This allows for the action and reflection that is an integral part of the learning process. It is often the case, however, in programs within organizational settings that time is at a premium, and as a result the work of the learning advisor is impacted.

> "They are in 15 days. We had 18 days with ... because that was considered a special program. He fought for those days. And I think that's good. I think it takes 20 days for you to do a good job. But you can do a good job also in the shorter time."
>
> "It's a mixed dilemma because if you wait until they need it (just in time learning) it's the end of the program. ... it gets speeded up."

Programs within organizations also pose other pressures that impact the work of the advisor. AL is sometimes used to help bring about organizational change (ARL ™ Inquiry, 1995). Some advisors feel that the pressure to effect this kind of change can create obstacles to the group's learning and the advisor's role needs to take those obstacles into account.

> "An obstacle could be the host (the project owner). The host puts pressure on the project group. ... And I have to be the rule of the group then, to give them the authority, let them take their authority in the project."
>
> "I'm not in favor of using programs like ours to implement strategy from the top down because if that's the contract, we don't have the freedom to debate and problemitize."

On the other hand, "university programs may be different because we don't have some of the same external pressures." University programs are geared towards participants using AL to investigate and research their own, or their organizations, problem - not only to learn and solve the problem, but as a means to earning a degree. The time frames are dictated by university requirements, as opposed to organizational, and any other pressures are generated primarily by the participants. As a result, the role of the learning advisor in a university is not as impacted by the same kind of external pressures that an organization might exert.

Program Design As stated earlier, there are many different AL program designs. There are 2 design factors that are frequently cited by advisors that impact the way in which they carry out their role. The first is the difference when the participants are dealing with individual problems, either their own or their organization's; or when the group is focusing as a whole on one, usually an organizational, problem.

"There is a difference in an advisor in a program in a company in which there was a team project, an advisor in a program in which there were individual projects either in the same or different companies, and an advisor for a group of individuals doing their own projects or addressing current real problems."

"It is also different from facilitating with a group with a project than when they bring their own problems, because then you've got all sorts of other issues."

Revans (1982) emphasizes that one of the strengths of AL is recognized ignorance, which results in "questioning insight - Q insight", not "previously programmed, or P" knowledge. Some AL programs are designed, however, with pre-set "P" training modules built in, and/or the expectation that learning advisors will provide just in time learning as groups express or demonstrate needs. This design is often found in programs that are intended to help bring about organizational change (ARL ™ Inquiry, 1995; O'Neil & Marsick, 1994). The design strongly influences the teaching role the advisor plays. Some advisors see this as a natural role, while others are discomforted by it as they see it as a contradiction to one of the basic principles of AL.

"I want the advisor to show up in the program and give some of their experience some of their theory ... ."

" ... I can act as a facilitator of information for them. More often then not direct it, but sometimes, particularly if it's a group of managers who are very scattered, to actually get it to them."

"I need to be strongly convinced (about just in time learning). ... I think that it's a trap, very seductive."

Needs and Attitudes of Participants The education and preparation of participants, or lack thereof, prior to their engagement in an AL program has an impact on the learning advisor. Many advisors make use of some form of a pre-program orientation. Participation in the program needs to be voluntary and it is useful for participants to have a basic understanding of the AL process.

"If I have a group that wants to be there ... I don't have to do any task stuff."

"I least like having to feel responsible for making it work, doing all the organizing, having to push people ... terrible trap get into from time to time. ... depends on the way the program is set up or people's attitude in the group."

Internal Influences Based on their background, values and attitudes, it appears that learning advisors create different meanings around their roles in AL that serve to frame much of their interaction with their groups. These meanings can be interpreted as a "consecrated self", a "mystery maker" and a "radical advisor".

Consecrated Self For many learning advisors, there appears to be an underlying current of spirituality to their work. This spirituality sometimes seems to come from the impact of an influential other, and in other cases from a view of what is crucial to be successful in the work.

As some learning advisors discuss their view of their roles, they make explicit religious connections. These connections impact the way in which they view themselves and the role they play as learning advisors. In some situations, the view of their work as a vocation conflicts with the reality of doing the work of a learning advisor for pay, and results in anxiety.

"Revans precursors often religious figures or moral philosophers ... Revans talks about the soul of the individual person, the salvation ... . That influences me."

" ... servants seeking service rather than 'I have something you can buy from me'. People who are making a living may be troubled by it."

In other cases, as they discuss their actual work and describe their connections to values and the need to submerge their needs to that of the participant, there are sometimes more implicit spiritual connotations that can be drawn.

"There is a link to values ... all have a particular anchor."

"I identify with my principles ... what I do and what I am I can't separate."

"First of all I would look for someone who is not too egotistical, somebody who is prepared to subordinate his needs to the needs of the group."

Mystery Maker There are learning advisors who try to create a mystery about what they do. In doing so, they create a situation in which the focus is on themselves rather than the group. The group may be getting something out of the work, but the advisor is too, contrary to what should be happening in an AL program. Some advisors are explicit in expressing this "mystery".

"It's not possible to describe what I do."

"That the group is not at all clear at the beginning what it is, why is this fellow here."

Others seem to be less aware that they mystify their role and sometimes struggle to be more explicit.

"I can't explain how I decide (on an intervention)."

"I could say that it's intuitive (decision to make an intervention). But I suppose it isn't."

Being a mystery maker is the role most criticized by other learning advisors. It is one of the most frequently identified "taboos" among advisors. In response to questions about taboos and obstacles in their work, advisors reply:

"Bringing themselves (the advisors) in. 'I am important. Can you see me?'."

"Pursuing your own ambitions ... too much focus on yourself and your own interests ... can't separate out the group's needs."

" ... Revans' admonition about consultants ... taking over the process and making it about them."

Although most learning advisors recognize the inappropriateness of the group focusing on the advisor rather than the participants, many struggle with trying to avoid being a mystery maker themselves. There appears to be a natural inclination to be more involved than is viewed as beneficial to the group, but most advisors recognize this as a problem and work to avoid it.

"I have a need for feedback that I need to suppress."

" ... a bit of showbiz ... can get away with that because I'm the bloody advisor. It doesn't do you any good in the long run because it increases their dependency on you."

"I find that because I'm, one of my weaknesses, because I've been trained partly as a consultant, if I'm not careful, the role I get into is helping them solve problems."

Radical Advisor One of the key values in AL is that of empowerment. According to McGill and Beaty:

"We believe that action learning is of use far beyond its present boundaries and that it offers a democratic, liberating experience of learning to those who would try it. ... Action Learning is empowering because it starts and ends with the individual and their project, making a necessary and direct link between thought and behaviour, theory and practice, reflection and action" (1992, p. 31-32).

Some learning advisors interpret a significant part of their role as enabling the AL participants to use this empowerment to question and challenge authority. Their view of AL appears to fit more of a radical mindset than one of strictly development within the approved paradigm. In some cases, advisors speak of experiences in their lives that helped form their views around the importance of this role.

"A powerful influence ... there are certain traditions of liberal, democratic adult education which I had never found anywhere else ... this is dealing with adults and assuming their knowledge is as important as yours and not privileging your own knowledge."

Other advisors use terms like courage, opposition to authority, unconventional, and freedom, to describe what makes them feel that their work with the group has been successful or fulfilling. In response to a request to describe a successful intervention advisors reply:

" ... (the group has) shown some courage to oppose authority. One of the main purposes is the way people handle authority ... when I see people with the courage to do something unconventional."
" (I tell the group) ... You are not going to succeed as you usually do. You don't have to. ... What I'm trying to tell them is now you have a chance to do something for yourself."
"I have a long talk with the client and ask him if he wants to give them freedom to act. ... And I tell him that I want my group to really do whatever they want that is best for them and not for him."

Significance and Future of the Research

As the developmental needs of individuals and organizations change as the result of our continuously changing environment, human resource professionals will also need to change their support of these individuals and organizations from some of the more traditional models of development that have been successful in the past. AL appears to hold a promise to be a process that may be able to meet these continuous development needs (ARL ™ Inquiry, 1995; Weinstein, 1995). The results of this study will help the human resource professional better understand the critical role of the learning advisor in AL, and other similar developmental learning processes, and enable them to better prepare individuals to perform this role.

I believe this first phase of the research provides insight into two areas; the impact of program design on the work of the learning advisor, and considerations for choices of individuals to fulfill the role. When a program is designed for an organization, there are pressures from the organization that can serve to dictate the design. Since these pressures cannot always be alleviated, it is important that the objectives of the program, and the role of the learning advisor in meeting those objectives, be explicitly planned and discussed so that the role is clear to all involved with the program.

The results also provide some input into the selection of individuals for the learning advisor role. Training and/or experience in group interaction and process, in general, appears to be carry over to working with AL groups. Systems theory, while not mentioned as frequently, seems to be particularly useful for AL programs within organizations. From a less formalistic, but perhaps even more important, perspective, is selecting someone with a maturity that comes from not having to be the center of attention, but a maturity that enables them to instead focus on the needs, particularly learning needs, of others.

The next phases of the research will look more closely at the specific ways in which the learning advisor fulfills his/her various roles in AL programs. Of particular interest will be a look at what the learning advisors say they do and what they actually do in practice; and if there are differences, what the causes of those differences may be.

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Designing an Effective 360-Degree Appraisal Feedback Process

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Human resource development (HRD) can play a major role in designing an effective 360-degree appraisal process, in addition to training 360-degree appraisers, appraisees, coaches, and administrating the overall appraisal process. A conceptual model for a 360-degree appraisal feedback process is presented in this paper. The inputs, throughputs and outputs of the 360-degree process are discussed based on the author's experience and research. The model is presented as a guide to help HRD practitioners attain desired outcomes for 360-degree appraisals.

Organizations are beginning to use a 360-degree feedback process. In this process individuals appraise themselves and also receive appraisal feedback from their appraisers; immediate supervisor, peers, and from direct contributors if they are managers. A recent survey by the author of 280 Midwest companies indicates that 25% use annual upward appraisals, 18% are using peer appraisals and about 12% are using full 360-degree appraisals.

Human resource development (HRD) can play an important role in helping organizations attain desired outcomes of the 360-degree appraisal process. Short-term outcomes include an increase in individuals' awareness of their strengths and weaknesses as well as an increase in positive changes in individual work behaviors. However, there are additional outcomes such as the improvement of open and candid communication between individuals and their appraisers. Long-term outcomes should also be considered, such as an increase in the amount of informal feedback that individuals seek from their appraisers, improvement in decisions about promotion, and enhancement of organizational learning. These outcomes will be discussed in more detail later in this article.

The purpose of this article is to share a 360-degree appraisal process model with HRD professionals. The model is based on the author's experience in consulting and implementing 360-degree appraisals with four organizations (manufacturing, service, and public not for profit). Within these organizations the author used 360-degree project teams to help in the design, implementation, and evaluation of the 360-degree process. Results of studies testing different components of the model will be discussed along with the results of surveys assessing the perceptions of the 360-degree process.

A Model for an Effective 360-Degree Appraisal Process

In designing a model for a 360-degree appraisal process, a systems view was used to describe the big picture and the specific components of the process. There are three major components of a system: input, throughput or process, and output. Figure 1 shows the overall model and the specific 360-degree appraisal factors to consider under each of the system's components.

The Inputs Input includes factors or activities that should take place before appraisers complete 360-degree appraisal surveys and before individuals receive 360-degree appraisal feedback. Eight major input factors are included in the 360-degree appraisal model. These factors include (1) the objective of the 360-degree appraisal, (2) the format of 360-degree appraisal instruments, (3) the importance of anonymity for appraisers, (4) selection of peer appraisers, (5) training for appraisers, (6) training individuals (appraisees) how to get the most out the summary results of their 360-degree appraisals, (7) training coaches how to coach others using the 360-degree appraisal feedback, and (8) the design of the report summarizing the 360-degree appraisal data.

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Figure 1
A 360-Degree Appraisal Process: A Model

Inputs →	Process →	Outputs
1. The purpose . . . developmental vs. evaluative 2. The appraisal form - Written feedback 3. Appraiser anonymity 4. Appraiser selection - Peers 5. Training appraisers 6. Training appraisees 7. Training for coaches 8. Feedback report	1. Self-appraisal 2. Types of feedback 3. Bench-mark data 4. Coaching steps 5. Targeting improvement 6. Action plans 7. Reporting results back to appraisers 8. Specific goals/action 9. Just-in-time training 10. Mini assessments/follow-up 11. Recognition for improvement 12. Accountability	1. Increase awareness of other's expectations 2. Improvements in individual work behaviors/performance 3. Reduction of undiscussables 4. Increase in periodic informal 360-degree performance reviews 5. Organizational learning

The Purpose of 360-Degree Appraisals. One objective of 360-degree appraisals is to help individuals develop by giving them feedback. Another objective is to use the appraisals to evaluate individuals and make personnel decisions. A developmental objective should be used for the first three years before using the appraisals to make personnel decisions like compensation, promotion, or demotion. Research suggests that peers do not want appraisals to be used for evaluation (McEvoy & Buller, 1987). Direct contributors may inflate upward ratings if the ratings are used to determine their manager's merit raises. People need time to build trust in the 360-degree process before 360-degree appraisals are used for evaluation. In addition, the first three years of a 360-degree process should be reserved to build an organization's learning curve in using 360-degree appraisals.

The 360-Degree Appraisal Instrument. It is important that 360-degree appraisal feedback is relevant and specific. Therefore, organizations should develop their own 360-degree appraisal instrument or survey or require that pre-developed commercial 360-degree appraisal surveys are customized to fit the organization. In addition, companies that design their own surveys may achieve greater employee acceptance and commitment to the 360-degree feedback process if employees' input is included in the design of the survey. Initial time and cost factors are high when companies develop their own surveys; however, it may be cost effective if a company has more than 100 employees. If an organization wants to start with surveys developed by management consultants, the Center for Creative Leadership has a current list of the most reliable surveys and their costs (Van Velsor & Leslie, 1991).

Written Feedback is Invaluable. Focus groups conducted by the author within the four organizations revealed that appraisees desire written feedback because it would help them target individual work behaviors that needed improvement. Most appraisers also indicated they wanted an opportunity to provide written comments on the 360-degree appraisal survey. The specific rating scaled items serves as a frame of reference regarding work behaviors and performance and the written section provides additional feedback to support the ratings.

Follow-up survey studies by the author indicate that individuals find written feedback more helpful than rating scales in explaining how they are perceived by their staff. In addition, appraisers indicated that most of them were not fearful of providing written comments. However, some appraisers were concerned that individuals might be able to recognize who made specific comments if only a few appraisers completed the 360-degree appraisals. Individuals need to make sure they respect their appraisers' need for anonymity or they will risk losing valuable feedback in future 360-degree appraisals.

Requiring Appraiser Anonymity or Accountability. Research indicates that managers prefer that their direct contributors (appraisers) be held accountable for upward appraisal rating responses (Antonioni, 1994). That is, they want their direct contributors to sign their names on the upward appraisal surveys. Scholars on upward appraisals however, strongly suggest that staff's responses remain anonymous (Bernardin, 1986).

A study on upward appraisals investigated whether there were empirical differences between appraisals which asked appraisers to be accountable and those which insured appraisers' anonymity. The results of the study show that while managers wanted their direct contributors to be accountable for their

ratings, direct contributors wanted their ratings to remain anonymous. In addition, direct contributors who had to sign their names to the upward appraisal surveys gave their managers higher ratings than those who used an anonymous procedure. Follow-up interviews indicated that direct contributors rated their managers higher due to concerns over their managers' reactions to the evaluations (Antonioni, 1994).

Selecting Appraisers. There is the possibility that some appraisees may select peers who they feel will give them favorable appraisal ratings and comments. Selecting peer appraisers can become an issue unless peers are selected using an objective criteria such as the extent of interdependency and an opportunity to observe of peer work behaviors. For example, peers who are internal customers of the appraisee should be selected. In addition, the appraisee and his or her supervisor should jointly select peer appraisers.

Training Appraisers. HRD should provide training to all 360-degree appraisers. Appraisers need training on how to spot and avoid making rating errors such as halo effect, central tendency, range estriction, leniency, and harshness. Halo effect for example, occurs when a appraiser fails to differentiate between performance dimensions and generalizes from one dimension to all other dimensions. Halo effect is common in upward appraisals (London, M., & Wohlers, A. J. (1991).). For example, a manager maybe rated as average on all areas of supervisory behaviors because the appraiser believes she or he is average in one dimension (such as coaching). Appraisers can benefit from training that provide them a common frame of reference for using the response categories to evaluate different supervisory behaviors (Bernardin & Beatty, 1984). Whatever response scale is used, appraisers should become familiar with it prior to the appraisal.

Summary Reports of 360-Degree Appraisal Results. The way that the results of the 360-degree appraisal are presented to individuals may affect the outcomes. The data needs to be presented in a manner the individual can easily understand. Individuals must be able to quickly identify their strengths and areas that need improvement. Summary feedback forms should use a visual bar chart comparing self-ratings to appraisers' ratings for each question. Merely presenting numbers and expecting individuals to compute the differences is not as effective as the pre-computed visual bar chart. Written comments are valuable, especially when the comments reference survey items and provide examples or make the appraiser's expectations more explicit.

Training for Appraisees. HRD should provide all individuals who are appraised by others with training in four areas: analyzing the data and selecting improvement targets, processing feelings associated with receiving unexpected negative feedback, discussing the summary results with their appraisers, and setting specific goals and action plans. Usually 360-degree appraisal summary reports contain a lot of data. Individuals may need help making sense out of the data. If the 360-degree appraisal data suggests a need for improvement in a number of areas then individuals need to prioritize improvement targets. Individuals should also have training to prepare them for receiving unexpected negative 360-degree appraisal feedback. The training should also demonstrate ways to discuss the results of the 360-degree appraisals with appraisers and point out the benefits of doing so. Finally, individuals need training on setting specific goals and action plans for goal attainment..

Training for Coaches. Most individuals need someone with whom they can openly discuss their 360-degree appraisal results. Coaching is important in helping individuals interpret the 360-degree appraisal results, mutually setting improvement goals with individuals, and following up on action plans. Coaches play an important role in helping individuals shape new individual behaviors. It is common for immediate supervisors of appraisees to be the coach. These supervisors need specific training on how to conduct coach using 360-degree appraisal results.

The author's survey results however, indicate that appraisees are not satisfied with the 360-degree coaching they received from their immediate supervisors. Supervisors tended to be poor listeners and talk too much in the coaching sessions. Training for coaches should include active-listening, focused interviewing, selecting targeted improvement areas, dealing with feelings and reactions to unexpected negative 360-degree appraisal feedback, setting specific goals and action plans, follow-up, and shaping the development of new behavioral "habits."

Throughput or Process Individuals need an effective process to turn their 360-degree appraisals results (input) into desired outcomes. The process should insure an increase in individuals' awareness of how others see them and how to take ownership for improving targeted areas. The process should also teach individuals how to share and discuss their 360-degree appraisal results with their appraisers. To make sure the process is fully effective organizations should provide just-in-time training, conduct mini-360-degree appraisal assessments, recognize improvements in desired work behaviors, and insure that individuals are accountable for making needed improvements.

Using Self-Appraisal. Self-assessment, especially when done for developmental reasons, tends to set the stage for receiving constructive feedback. Individuals who do a self-assessment can highlight the discrepancies between how they see themselves and how others sees them. This usually creates a constructive tension and motivates individuals to examine the areas that appraisers indicated needed improvement. Some individuals are surprised by ratings from appraisers that are lower than their self-ratings. These individuals tend to have overrated themselves. The unexpected low ratings let them know that they need to improve specific areas or at least discuss the discrepancy between their ratings and their appraisers'.

Self-Perception Accuracy and Reactions. The extent to which individuals see themselves as appraisers see them is an important component of processing the 360-degree appraisal feedback. When individuals compare appraisers' ratings to their self-ratings, two dimensions can be used to describe individuals' reactions to their analysis of the 360-degree appraisal feedback. One dimension relates the appraisers' desire for changes in work behaviors or performance. The other dimension focuses on the extent to which 360-degree appraisal feedback came as a surprise to appraisees. Based on these two dimensions four types of feedback are possible. Type 1 reactions are positive because the self-appraisal is in agreement appraisers. The reactions are positive because individuals receive expected positive feedback from appraisers. This can be labeled as an individual's strength. Type 2 reaction is also positive because the individual is not expecting positive 360-degree appraisal feedback. Individuals with this reaction rated themselves lower than appraisers did. Therefore this type of feedback indicates the individual's hidden strengths. Type 3 reaction is usually neutral because the individual expected and agreed with the low 360-degree appraisal ratings and therefore is labeled has a definite area for improvement. Type 4 reactions can vary from confused to defensive because the individual received unexpected low 360-degree appraisal ratings, which usually means that the individual gave himself or herself higher ratings than appraisers did. Type 4 feedback is the most difficult feedback for individuals to process because of the discrepancy between appraisals of self and others. In some case's individuals accept this feedback after they have had time to process it. A good coaching session can help some individuals effectively process this feedback. In some case's individuals need to get more information from their appraisers before they can accept that a change in their behavior is needed.

The author's survey results regarding the percentage of the four types of feedback manages received indicate the following. Regardless, of appraiser source, managers reported that about 25% of the feedback they received was expected positive feedback, 30% unexpected positive feedback, 20-30% expected negative feedback, and 15-20% unexpected negative feedback. The percentage of unexpected negative feedback is supported by follow-up survey results from appraisers. Appraisers indicated that 19% of the managers would be surprised by low ratings on the 360-degree appraisals and that 15% of the managers definitely needed to improve their supervisory behaviors. Moreover, follow-up results from the managers indicate 20% of them did not know what their weakest supervisory behaviors were before they received their 360-degree appraisal results.

Providing Benchmark Data. One way to create motivation for improvement is to provide individuals with norms so that they can compare how they are doing in relation to other individuals. Individuals who received low ratings may be more motivated (internal tension) to improve if they can compare their ratings to aggregate ratings from other individuals within the organization. Follow-up survey results with individuals indicate that most individuals want 360-degree appraisal benchmark information. Unfortunately, when organizations designed their own 360-degree appraisal surveys they did not have normative data available until after the first year. It is important for each organization to assess how important benchmark data is to individuals.

Coaching for Improvement. Reviewing 360-degree appraisal results is important for two reasons; it gives individuals an opportunity to share their feelings about the results and to discuss their plans for improvement. Usually there is too much 360-degree appraisal data to interpret. Research studies suggest that individuals who have review sessions with human resource development trainers understand the data more easily and focus on the areas that need improvement (Nemeroff & Cosentino, 1979).

The author's survey results indicate that only about 50% of the individuals discussed the 360-degree

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appraisal results with their immediate supervisors. Organizations need to pay close attention to the coaching process for a number of reasons. Individuals who need to make significant improvements may choose not to meet with their supervisors. In some cases individuals are concerned about sharing their poor 360-degree appraisal results with their supervisors because they are not sure how the results will be used. This is especially the case with upper middle individuals and senior individuals. Some executives have indicated that they feel they have too much to lose by openly discussing their low-rated individual work behaviors with their bosses. They would rather discuss their 360-degree appraisal results with a neutral party such a human resource development specialist or a management consultant. HRD specialists were effective in using upward feedback to help managers improve their performance appraisal interviews (Nemeroff & Cosentino, 1979), and a consultant was effective in helping managers improve their supervisory behaviors based on upward appraisals. (Hegarty, 1974).

Targeting Tentative Improvement Areas. Without a formal review and goal-setting process, individuals who receive 360-degree appraisal feedback without appropriate coaching may have a difficult time deciding which behaviors are in most need of improvement. For best results individuals should target two or three low-rated behaviors and set tentative improvement goals. Then individuals should meet with their appraisers and share the areas they have targeted for improvement. The purpose of meeting with appraisers is to seek additional information which should help individuals set specific rather than general improvement goals.

Developing Action Plans. Developing action plans needs to occur at two points -- one at the time individuals reviews their 360-degree appraisal results with their immediate supervisors and again after individuals have shared their results with their appraisers. At point one, the individual develops tentative plans for improvement with his or her immediate supervisor. It is important to include plans for what and how to discuss the 360-degree appraisal results with the individual's appraisers. After the individual has shared the 360-degree appraisal results with appraisers, the individual should have more information on the targeted individual work behaviors that need improvement.

Reporting summary results back to appraisers. Individuals can increase employee involvement and communication by sharing the results of their 360-degree appraisals with their appraisers. Therefore, the 360-degree appraisal process should require that individuals let their appraisers know the results of their 360-degree appraisals and what they plan to do with the results. This gesture conveys an appreciation to appraisers for completing the 360-degree appraisals and also gives them an opportunity to hear a summary of individuals' strengths, weaknesses, and goals for improvement. Individuals may be more committed to improving their behaviors when they share their improvement goals with their appraisers. In some instance's individuals may want to discuss areas of discrepancy with their appraisers to gain more clarity on the gap between appraisals of self and appraisers.

The author's survey results indicate that 60% of the direct contributors reported that managers appraised by them had not shared summary results of their upward appraisals with them. Furthermore, 76% of the appraisers reported that their managers did not discuss improvement goals with them. Direct contributors wanted to know managers' reactions to the results and expected managers to address the supervisory behaviors that needed improvement. Appraisers will probably question why the necessity of completing the 360-degree appraisal surveys if individuals are not going to make attempts to improve. Thus, a failure to discuss the results of employee opinion surveys can lead to widespread employee cynicism. Organizations should not consider using 360-degree appraisals unless top and senior management commits to taking the process seriously. On the other hand, if 360-degree feedback is respected, the organization may gain a competitive edge because it is providing a structure and a process for candid communication (London & Beatty, 1993).

Setting Specific Improvement Goals and Action Plans. Individuals need to finalize their improvement goals after they have met with their appraisers. It is critical to teach individuals how to set improvement goals. Research suggests that more improvement occurs when a formal review of feedback includes goal-setting than when individuals only receive feedback (Nemeroff & Cosentino, 1979). However, it is also critical that the goals are specific rather than general.

The author had opportunities to access completed improvement goal-setting forms in two organizations. The author and two colleagues independently rated the extent to which improvement goals and action plans were specific. Goals had to be specific, measurable, and time bound. This meant that a time line was stated for improvements of specific work behaviors. The results indicated that almost all of the goals were general, not specific. Fuzzy objectives like "do a better job of delegating" or "spend more time listening" were common. Post-study interviews with individuals reveal that individuals and their immediate supervisors spent very little time writing out specific improvement goals and action plans. Failure to set specific goals based on the 360-degree appraisal results will contribute

to a lack of improvement in individual work behaviors even in cases where intentions are good.

Receiving Just-in-Time Training. Immediate training should be part of the individual's action plan for improvement. Training should occur within on or two months after the improvement goals are set. Individuals need training during this period for a number of reasons. First, the 360-degree results should increase individual's awareness of the need for improvement and the need for training. Second, if individuals receive training immediately, they may stand a greater chance of making improvements salient enough to receive positive recognition from their appraisers. Individuals may need this recognition to encourage them to discontinue using old, ineffective behaviors and begin practicing new effective behaviors.

The author's survey results revealed that individuals were often left to figure out for themselves how to improve low-rated supervisory behaviors. Some of the individuals reported that they tried to find someone in the organization who was very good at the behavior they wished to learn. For example, one individual reported that instead of waiting to attend a time management seminar he consulted with someone within the organization who was a "master" at time management.

Mini-Appraisals and Follow-up on Action Plans. Individuals may need to receive more 360-degree appraisal feedback throughout the year by using mini-360-degree appraisal surveys. These surveys include only the questions that received the lowest ratings on the original 360-degree appraisal. Human resource development personnel could administer these brief surveys. Periodically (about every four months), appraisers would complete the mini-assessment to evaluate the individual's improvement in his or her most problematic areas. This approach may help individuals receive recognition for improvements because of the additional feedback throughout the year.

Individuals and their immediate supervisors need to follow through on the steps listed in the individuals' action plans. In one follow-up survey, 72% of the individuals reported that their immediate supervisors had not followed up on action plans based on the 360-degree appraisal results. Individuals indicated that it was easy to overlook following up on their own action plans because other high-priority tasks needed their attention. Individuals' immediate supervisors indicated they felt it was not their job to be watch dogs and it was up to the individuals to make sure they completed their action plans. Supervisors assume that good individuals will make sure they do what is necessary to make self-improvements. The follow-up process may be one of the most critical contributions toward improving individual work behaviors.

Recognition for Improvements. Positive reinforcement is critical for helping individuals shape new individual work behaviors. Lessons from behavioral psychology are applicable here. In designing the 360-degree appraisal process it is crucial to raise individuals' awareness about the link between reinforcement and desired effective individual work behaviors. However, survey results indicate that 87% of the individuals felt their appraisers and supervisors had <u>not</u> recognized them for their efforts to improve their individual work behaviors. Mini-follow-up appraisals may indicate to some individuals that they are not putting enough effort into improvement and therefore explain why they are not receiving positive feedback from their appraisers. Follow-up appraisals may be an important step in the process in providing individuals with recognition for their improvements from their appraisers.

Accountability for Performance Improvement. There are at least four ways to hold individuals accountable for responding to their 360-degree appraisal results. The first way is to ensure that individuals share and discuss the results with their appraisers and make commitments to improve areas that need improvement. The second way is to require that individuals share the 360-degree appraisal results with their immediate supervisors. However, the survey results indicate that this approach needs significant improvement if it is going to be effective. The third approach, which some organizations are using, is to include the 360-degree appraisal in the annual performance appraisal. While this may help promote accountability, organizations need to address two problems associated with annual performance appraisals before using this approach. Research suggests that only about 60% of executives and upper level individuals receive annual performance appraisals (Longnecker & Gioia, 1988). Organizations need to make sure everyone has a performance review if 360-degree appraisal results are going to be part of this review. Next linking merit raises to 360-degree appraisals is problematic because of the problems associated with the merit raise process. The author's survey results indicates that appraisers are concerned about the negative side-effects of their 360-degree appraisal ratings being used to determine merit raises. This concern can lead to inflated ratings. The fourth and final approach is to create a link between the failure to improve individual work behaviors and some type of negative consequence. IBM, for example, lets managers know that if poor supervisory behaviors are not improved within two or three years they will be asked to resign from their positions and to move to a strictly technical position. This type of link lets individuals know the company expects individuals to use the 360-degree appraisal

feedback to improve weak areas. Along these lines some insurance companies use 360-degree appraisal data as one piece of information to determine whether promote individuals should be promoted to higher level management positions. There is even empirical research demonstrating that 360-degree appraisals are better than assessment center analyses for predicting good individuals (McEvoy, 1987).

The Outcomes There at least five possible outcomes of a 360-degree appraisal process. These outcomes include (1) increased awareness of appraisers' expectations, (2) improvements in work behaviors and performance, (3) reduction of undiscussables, specifically, appraisers' feelings and perceptions about undesired behaviors of the appraisees, (4) increase in effective periodic informal 360-degree performance reviews, and (5) increase in organizational learning.

Increased Awareness of Appraisers' Expectations. The first outcome is an increase in individuals' self-awareness due to an understanding of the ways that appraisers perceive them. Research results suggest 360-degree appraisal feedback can alter individuals' self-evaluations (Atwater & Yammarino, 1992) . Individuals who rated themselves higher than their 360-degree appraisal ratings tended to reduced their self-ratings in subsequent self-appraisals. Research supports the importance of creating an alignment between expectations of self and others (Moses, Hollenbeck & Sorcher, 1993). Individuals with more accurate self-perceptions are known to be better performers and more successful (Atwater & Yammarino, 1992).

Improvement in Individual Work Behaviors. The second outcome is an improvement in individual work behaviors. Only two experimental field studies on improvements in individual work behaviors have been reported up to this point. One study demonstrated that a consultant who reviewed the upward appraisal results with first-line supervisors was able to help supervisors make significant improvements in their individual work behaviors three months after the initial appraisal (Hegarty, 1974). The second experimental study, in which the managers' immediate supervisors reviewed upward appraisal feedback found no significant improvements in supervisory behaviors three months after the initial appraisal (Antonioni, 1995). The difference between the two studies may relate to the effectiveness of the person coaching the Appraisee. Consultants may be more effective because they have the skills and take the time to coach individuals. Future research is needed for a direct comparison between consultants and supervisors. From the author's experience, the coaching factor is a critical part in the design of the 360-degree appraisal process. The process must be designed to produce results. Anything less will lead to frustration and disappointment for the appraisers who are asked to complete the appraisals and anyone else involved in the process.

Reducing the Undiscussable - Undesired Work Behaviors. The third outcome is a reduction in the undiscussable -- candidly discussing frustrating undesired work behaviors. Consider the two-year study on work and well-being by Hogan and Morrison (1991). They reported that "in study after study, across organizations, occupations, geographical locations and time periods, at least 60% of the workers surveyed reported that the most stressful aspect of their job is their immediate supervisor." The authors suggested that there is a 60-75 % base rate for managerial incompetence. One possible reason that the percentage is so high is the infrequency that individuals are given individual work-skills training prior to placement in management positions. Furthermore, once individuals are placed in management positions, they seldom receive feedback to help them learn what behaviors need improvement. Although their input is sorely needed, up until recently it was dangerous for appraisers to give honest feedback to individuals who have the power to hire, reward the appraisers. Therefore, organizations may want to consider the reduction of undiscussables as one positive outcome and conduct studies to determine if there are correlations with other variables such as turnover, absenteeism, visits to the doctor, and productivity.

Increase in Informal 360-Degree Performance Reviews. The fourth outcome, informal 360-degree performance reviews, is a visionary-type goal for 360-degree appraisals. Ideally, formal 360-degree appraisals should teach individuals and their direct reports how to improve their communication, especially giving and receiving constructive feedback. In the past, it was not the norm for individuals to actively seek feedback from their appraisers because of the costs (fears) of being perceived as weak and dependent. Now, however, with the emphasis on servant and stewardship leadership it is plausible for individuals to seek information on whether they are meeting their "customers' expectations. Management's active feedback-seeking behaviors as well as the number and quality of informal 360-degree performance reviews can be measured by asking appraisers. Organizations may want to focus on this visionary goal because 360-degree appraisals done once a year may not be sufficient.

Improve Management/Organizational Learning. The fifth and final outcome is organizational learning. The emphasis for this type of learning is on attaining a mindset shift or renewal. For this to

take place members of the organization need to learn how to openly discuss and learn from their mistakes. Aggregate 360-degree appraisal data is a gold mine. All that is necessary is that a designated responsible individual (HRD) prepare the results in a manner that stimulates an interest in learning from the data.

The author helped the human resources department in one organization use the aggregate data to stimulate discussion of management development in a management training workshop. The human resources department developed a profile of a real-ideal supervisor based on an analysis of what the best individuals were said to be doing. In addition, themes about management's behavior existed in the written comments. For example, one recurring comment read "be less political and emphasize the positive principles and values you stand for." This comment lead the organization to examine whether individuals "walked the talk" of espoused management behaviors. Individuals took ownership for perceived realities and shared mistakes they felt they made in leading and managing people. The discussion continued by examining their assumptions about management. The discussions produced a major mindset shift of managing from power and control to sharing power and control with organizational members. The training in the workshop became more meaningful because it was customized based on aggregate anonymous 360-degree appraisal comments and created a dialogue that had been missing in the organization.

Conclusions

The intent of this article is to provide guidelines to practitioners for designing an effective 360-degree appraisal processes. Organizations considering implementing 360-degree appraisals should first define realistic desired outcomes and then develop the specific processes to attain those outcomes. Some organizations are jumping into implementing 360-degree appraisals without clearly defining the mission and the scope of the appraisals. Organizations appear to be focused on improvement in work behaviors as the primary outcome. However, if the 360-degree appraisal process is not designed to help individuals make improvements the appraisers will be disappointed and disillusioned. This will lead to frustration and ultimately 360-degree appraisals may develop a poor reputation similar to downward appraisals.

Finally, the 360-degree feedback process offers a major opportunity for organizational members to improve the quality of their work relationships. The model presented in this paper can help appraisers and appraisees effectively define the quality requirements in their work relationships. The process can teach individuals how to give and receive constructive feedback effectively and provides a structure for discussing the undiscussables. If the 360-degree appraisal process is effective, organizational members should not only improve in work behaviors and thus performance, but also stimulate active learning within the organization.

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A Survey About Training Evaluation Practices in Selected Organizations: Summary of Results

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Training evaluation (TE) has emerged as a major issue for HRD professionals in recent years as decision-makers are demanding increased accountability for training efforts. While HRD professionals have frequently been advised to demonstrate the return on training investments, little is known actual TE practices in U.S. organizations. This paper summarizes the results of a 1995 survey of ASTD members. Although limited by a low response rate of only 18.57% (65 surveys returned), the results indicated that most TE is conducted by HRD professionals and that course evaluations ("smile sheets") remained the most frequently-used TE method.

Evaluation "is the process of appraising something carefully to determine its value" (Rothwell & Sredl, 1992, p. 411). As McLagan (1989) has pointed out, HRD professionals play an important role as evaluator, which she defined as "identifying the impact of an intervention on individual or organizational effectiveness" (p. 58).

Training evaluation (TE) has received increasing attention. Consider that a bibliography on return-on-investment for training contains *hundreds* of citations ("Resource guide," 1994) and that books on evaluation are among the bestsellers of the field (Phillips, 1991). But that should not be too surprising. More than ever before, HRD professionals are being required to show that training has made an impact on the bottom-line and that results match intentions. Although much has been written about TE, however, too little is known about typical TE practices in U. S. organizations today.

What is the status of TE? To answer that general question--and continue the line of investigation begun with an earlier study on training needs assessment (Rothwell, 1996)--the author prepared and mailed a survey to 350 randomly-selected members of the American Society for Training and Development (ASTD) in May 1995. Although the response rate was disappointingly low--only 65 surveys were returned by September 1995, making the response rate a mere 18.57%--the results of this descriptive and exploratory do shed some light on current practices. They also raise additional, intriguing questions about TE.

This paper summarizes the results of the study. In the sections that follow the author will describe the research questions guiding the study, the study methodology, key conclusions and issues for future investigation.

Research Questions

The major goal was to assess current TE practices. More specific study goals focused around answering such questions as these:

1. Who conducts training evaluation?
2. What role does top management play in training evaluation in the respondents' organizations?
3. For what job categories is training evaluation most often conducted?
4. What training evaluation methods are most frequently used by selected HRD professionals who are ASTD members?
5. What training evaluation methods are perceived to be most effective by selected HRD professionals who are ASTD members?

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6. What did the survey respondents perceive to be the biggest problems or difficulties faced by organizations that conduct training evaluation?
7. What did the survey respondents perceive to be the biggest advantages that are gained by organizations that conduct training evaluation?

Methodology

The researcher began the study by drafting a survey to address the research questions listed above. The 4-page survey consisted of 12 items and numerous subitems. Questions 1-4 solicited background information about respondents and their organizations; Question 5 solicited information about training needs assessment in the respondents' organizations; Question 6 asked about top management's role in TE in the respondents' organizations; Question 7 inquired "who conducts training evaluation in your organization?"; Question 8 solicited information about the frequency of TE conducted for various job categories in the organization; Question 9 solicited information about how often respondents used various TE methods and how effective respondents perceived them to be. Question 10 inquired about the biggest problems encountered by respondents in conducting TE; Question 11 inquired about the biggest advantages resulting from TE when conducted in the respondents' organizations. Finally, Question 12 asked respondents to make any additional comments about TE they wished.

How Was The Survey Prepared? Two HRD professionals reviewed the survey prior to mailing. The researcher revised the survey based on their recommendations.

How Was The Survey Conducted? In May 1995 the researcher selected a random sample of 350 HRD professionals from the 1994 membership list of the American Society for Training and Development and mailed the questionnaire on May 5, 1995. Approximately 2 weeks after the survey was mailed, a follow-up postcard was sent to the original list of survey recipients to encourage a response. Names were selected from the alphabetic listing of ASTD members. Consultants and academicians were excluded when their names were drawn for the sample. No effort was made to follow-up with nonrespondents.

Limitations of The Survey. The survey results should be viewed cautiously for several reasons. This study was limited by (1) a low response rate, even for a survey of this kind; (2) possible systematic bias resulting from the use of a random sample of members of the American Society for Training and Development; and (3) no follow up with nonrespondents. Given the study's limitations, the results cannot be generalized beyond the respondent group.

Results and Conclusions

Although the response rate as 18.57%, not all respondents answered every question. Hence, responses vary by item. This section will report on the demographic information about the respondents and answer the major research questions posed by the study.

What Demographic Information Was Collected About the Respondents? Of the 57 respondents who indicated the industry in which their organization was classified, 18 (32%) represented manufacturing. Eleven respondents (19%) marked "transportation/communication/electric/gas," 3 (5%) marked "retail trade," 8 (14%) marked "finance, insurance, real estate," 5 (9%) marked "healthcare," 5 (9%) marked "government/armed forces," and 7 (12%) marked "other."

Of the 65 respondents that indicated the number of people employed by their organizations, 15 (23%) indicated their organizations employed between 500-1999 workers; 12(18%) marked between 2000-4999, 11(17%) marked 10000 and above, 8 (12%) marked 0-99, 7 (11%) marked 250-499; 7(11%) also marked 5000-9999, and 5 (8%) marked 100-249.

Of the 47 respondents who chose to indicate whether they have responsibility for supervising staff, 24 (51%) marked "yes" and 23 (49%) marked "no."

Question 1: Who Conducts Training Evaluation? Respondents were asked this question: "Who conducts training evaluation in your organization?" Respondents were presented with a list and directed to "circle all response codes that apply." Of the 65 survey respondents, 51 chose to answer this question. Thirty-four (67%) indicated "trainers only"; 15 (29%) indicated "other"; 14 (27%) indicated "an informal committee composed of trainers, line managers and others; 8 (16%) indicated "nobody"; 7

(14%) indicated line (operating) managers only; and 3 (6%) indicated "a formal, top-management commissioned committee."

Question 2: What Role Does Top Management Play in Training Evaluation in the Respondents' Organizations? The researcher was curious about the role of top management in TE. Accordingly, the respondents were asked the following question: "Almost every book on training and development indicates that top managers have a keen interest in showing the dollar-value return on money invested in training. However, it is not always clear exactly what they want or how they could be convinced that training is worth the money invested in it. In your organization, top managers (1) never ask for indications of the dollar return on training; (2) ask for indications of the dollar return on training only after it is delivered; (3) ask for indications of the cost-benefit of training before it is designed and delivered; and/or (4) participate personally in computing cost-benefit analysis of training results." Respondents were asked to check "yes" or "no" for all applicable enumerated items. Response rates varied by item. Of 58 respondents, 24 (41%) marked "yes" to item 1; of 55 respondents, 22 (40%) marked "yes" to item 2; of 53 respondents, 20 (38%) marked "yes" to item 3; and, of 53 respondents, 10 (19%) marked "yes" to item 4.

Question 3: For What Job Categories Is Training Evaluation Most Often Conducted? Respondents were asked this question: "for what job categories do you conduct training evaluation?" They were then presented with a list of possible job categories and frequencies identical to those posed on a separate and parallel survey on training needs assessment (Rothwell, 1996). The results of this survey on TE are presented in Table 1. The mean responses indicate that TE is most often performed for technical employees, supervisors, and production employees.

Table 1: Frequency of Training Evaluation by Job Category

Job Category	Frequency								
	Never	Once every 6+ yrs.	Once every 4-6 yrs.	Once every 3-4 yrs.	Once every 2-3 yrs.	Once every 1-2 yrs.	Once every year	Mean	Stnd Dev.
Executives	29	2	3	1	2	7	10	3.11	2.57
Middle Managers	18	3	1	4	4	9	13	4.0	2.55
Professional employees	16	4	3	1	5	8	16	4.19	2.56
Technical employees	12	2	3	-0-	4	12	18	4.76	2.46
Supervisors	12	2	4	4	4	5	22	4.68	2.47
Salespersons	13	3	3	2	3	3	13	4.0	2.6
Clerical employees	19	4	2	1	5	7	12	3.76	2.58
Production employees	12	1	1	2	4	7	16	4.63	2.55

Question 4: What Training Evaluation Methods Are Most Frequently Used by Selected HRD Professionals Who Are ASTD Members? Respondents were supplied with a list of 19 possible TE methods and were asked to indicate which ones they used most often. The survey results are

presented in Table 2. Not surprisingly, class evaluations ("smile sheets") ranked 1 by mean. However, observation and role plays ranked 2 and 3 by mean, respectively.

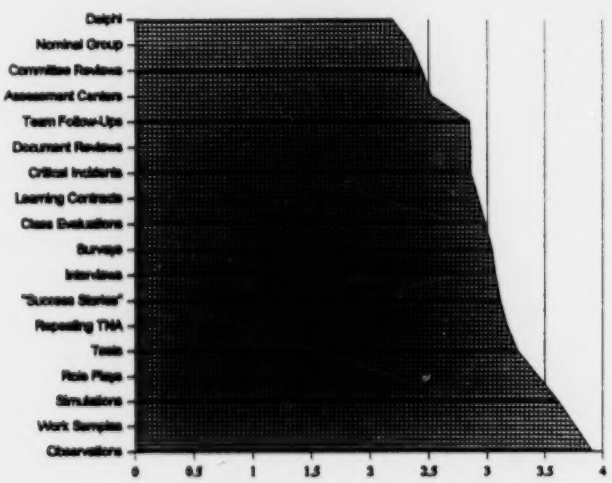
Table 2: Perceived Frequency of Use of Training Evaluation Methods

Training Evaluation Method	Frequency of Use						
	Not at all 1	Seldom 2	Some times 3	Frequently 4	Very Frequently 5	Mean	Standard Deviation
Surveys	8	9	18	15	9	3.14	1.25
Interviews	5	13	22	8	10	3.09	1.19
Observations	5	9	13	20	11	3.40	1.21
Work samples	20	8	10	9	9	2.63	1.51
Document reviews	27	7	11	4	5	2.13	1.36
Repeating needs assess-ment	18	9	16	10	5	2.57	1.33
Critical incidents	22	6	11	9	6	2.46	1.45
Delphi procedure	45	2	4	1	-0-	1.25	0.68
Nominal group technique	39	2	6	3	-0-	1.46	0.93
Assessment center	40	6	5	3	-0-	1.46	0.88
Self-directed workteam follow-ups	30	9	9	6	2	1.95	1.21
Meetings after training	16	16	15	6	6	2.49	1.28
HRD committee reviews of training results	38	7	5	5	-0-	1.58	0.99
Learning contract follow-ups	31	12	10	3	-0-	1.73	0.94

Simulations of performance during training	12	6	15	11	12	3.09	1.43
Role plays of performance during training	10	4	19	14	12	3.24	1.33
Tests after training	18	9	12	8	8	2.62	1.45
Class evaluations	6	2	5	13	35	4.13	1.30
"Success stories" told about training to others	13	11	10	13	9	2.89	1.42

Question 5: What Training Evaluation Methods Are Perceived to Be Most Effective by Selected HRD Professionals Who Are ASTD Members? Respondents were also asked to rate the relative effectiveness of the list of 19 possible training evaluation methods. The survey results are presented in Figure 1 based on mean responses. Note that, according to respondents of this survey, the most effective methods are perceived to be observations, work samples, simulations role plays and tests--in that order.

Figure 1: Perceived Effectiveness of Training Evaluation Methods By Mean Response



Not at all effective **Very Effective**

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Question 6: What Did the Survey Respondents Perceive to Be The Biggest Problems or Difficulties Faced by Organizations That Conduct Training Evaluation? Respondents were asked this question: "What are the biggest problems or difficulties that your organization has faced in conducting training evaluation?" That question evoked 1 ½ pages of single-spaced responses. Sample verbatim responses are provided in Table 3.

Table 3: The Biggest Problems in Conducting Training Evaluation

Note: Each bulleted item below is the verbatim response from one respondent.

- Lack of resources → needs assessment & follow-up. Subjective evaluation.
- No requests nor emphasis on evaluation. Do what has traditionally been done.
- Most managers don't understand what good training is, let alone evaluation. We are just beginning to get together a valid & reliable hard skills program.
- Headcount to staff a professional evaluation function. Selling staff groups on benefits of evaluation.
- On management development, finding a objective evaluation test.
- Turning a change of behavior into ROI.
- Managers pulling out employees while in session.
- Used the same evaluation instrument for at least 15 years. It was terrible--poorly designed, confusing, and management based major decisions on the results it provided! Incredible new instrument going on line in June.
- Finding an easy, inexpensive way to do it.
- Lack of objectivity--training is often outside driven. Also, top managers drive training results frequently.
- Time to develop. Lack task standards and procedures.
- Tying to specific business strategies.
- Lack of support, endorsement by senior management.
- Getting organization to take evaluation seriously.
- Accepting upfront cost and time associated with systematic evaluation.
- Budgets, difficult work environments.
- Allocating time and resources to do them. Obtaining effective follow-up from supervisors/managers of attendees.
- Lack of management support.
- Everyone is an expert. The higher the level of management the more expert they become.
- Being given time, "permission" to conduct evaluation. Seeing benefits of pre-implementation evaluation. Having time, "permission" to revise.
- Determining purpose and conducting the method.
- Providing criteria--sufficient detail, time to conduct evaluation of employee, skill of evaluator.
- No time to do them; no planning.
- Institution of a formal training procedure based on individual and organizational needs.
- Not enough time; poor methodology
- Getting anyone (trainees & supervisors) to help evaluate training after the class.
- Testing seems to have limited value; areas which should show greater benefit often show the least.
- Not getting cooperation from supervisors & managers. They're too busy.
- How to do it.
- Not getting support to conduct training evaluation.
- Don't know how to do it.
- Evaluating behavior on-the-job after training. We don't do enough of it.
- Evaluating training at all.
- Time: never enough of it; Data availability; methodology selection--what's best?

Question 7: What Did the Survey Respondents Perceive to Be The Biggest Advantages That Are Gained by Organizations That Conduct Training Evaluation? Respondents were asked this question: "What are the biggest advantages your organization has gained by conducting training evaluation?" That question evoked ½-page of responses. Sample verbatim responses appear in Table 4.

Table 4: The Biggest Advantages of Conducting Training Evaluation

Note: Each bulleted item below is the verbatim response from one respondent.

- Reassurance to use (HRD) that we're providing high quality programs; support for continued HRD programs; higher-level support and participation if we could show bottom-line results better; higher level of satisfaction for ourselves and others that we're providing the right solutions vs. just quality programs
- More strategic, focused training
- Written documentation proving or disproving the value & results of training
- We can compare participants' perceptions of how much they learned and how important it is to job success and plot various courses relative to each other. If a course is outside the normal distribution, we can improve it or cancel it.
- Classroom assessments used during a course provide feedback to instructor that can be shared/processed with class. This improves achievement of key learning objectives by all participants.
- Determining if we did the "right" training for the specific change we wanted to see--behavioral, knowledge, etc.
- Support for what we're doing; understanding needs
- Improve the level of training; target the training to the real needs of the client.

Issues for Future Investigation

Here are some recommendations for future research on training evaluation in no particular order of implied importance:

- What are the perceived advantages and disadvantages of each TE method for each job category?
- What affects how often TE is carried out?
- What affects the effectiveness of TE approaches and methods?
- What challenges face external consultants who conduct TE that differ from those faced by internal consultant/practitioners?
- How well integrated are TNA and training evaluation practices?

Conclusion

Interest in TE, like interest in training needs assessment, appears to be growing. Although this paper describes the results of a limited study, more intensive research should be directed to identifying and

examining typical as well as best-in-class TE practices. Without information about "what is really going on," it is difficult for academicians to develop worthwhile research agenda in the field.

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Comparing the Predicted and Actual Benefits of HRD Programs

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An assumption is made that once the financial benefits of HRD programs are forecasted, actual outcomes should be closely aligned with what was predicted. However, comparing the forecasted benefits to actual outcomes of HRD interventions is rarely done in organizations. This study first forecasted the expected benefits of a structured versus an unstructured on-the-job training program for two tasks. Next, actual benefits derived from the structured OJT approaches were evaluated against the predicted benefits. Implications about the discrepancy are discussed.

Cost-benefit analysis can help HRD practitioners be accountable for their efforts. Researchers likewise use cost-benefit analysis to determine how HRD professional practices can be made more effective. For example, a study by Bishop (1991) found that informal training by coworkers had a higher benefit-to-cost ratio than informal training by management. A study by Jacobs, Jones, & Neil (1992) showed that a structured on-the-job training (OJT) intervention would result in greater financial benefits to the organization than the unstructured OJT option.

The purpose of cost-benefit analysis is to determine the financial benefits expected for the organization, oftentimes after having made the HRD investment. The purpose of forecasting financial benefits is to determine the expected benefits for the organization before making an investment in an HRD program. Most cost-benefit studies available in the literature typically report high returns to the organization after the investment has been made, and suggest that these HRD interventions have positive outcomes (See Phillips, 1994). In addition, these studies have mostly been from a perspective of either predicting events or reconstructing events after the event has occurred. Prediction involves suggesting what might occur when the HRD program is implemented. Reconstructing events looks at the result after implementation, without any prior knowledge of the situation. A problem with evaluating HRD programs after the fact is that they may be subject to the participants seeing what they want to see. No studies were found that compared forecasted outcomes to actual outcomes.

As pointed out by Gradous and Swanson (1988) any way costs and benefits are figured will never provide a complete picture of the value of an HRD program. However, this study attempts to examine the discrepancy between the forecasted and actual outcome of an HRD intervention. The study also offers suggestions on how to close the gap.

Problem Statement and Theoretical Framework

One of the most pressing issues for human resource development (HRD) professionals is to substantiate the contributions they make to organizations. Several researchers have cited the need for HRD professionals to view their activities in terms of economic benefits to the organization (Braggs, 1989; Brinkerhoff, 1987). According to Phillips (1991), evaluating the bottom-line contributions of programs is one of the leading issues in the HRD field. As a result, there have been increasing calls for reviewing HRD from an economic perspective. Several cost-benefit models have been developed to carry out such a view. While these models have advanced the field in substantive ways, they have also opened up new concerns about the nature of this HRD process.

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First, when cost-benefit analysis studies have been reported, almost all have shown that one HRD program option is clearly preferable over some other option. The accuracy of these results may be viewed with some skepticism. In addition, aside from the studies that use a forecasting approach, many studies were conducted after the HRD programs had been used. Reconstructing events to fit the current reality may subject the researchers to a self-fulfilling prophecy. Finally some researchers in the field have come to doubt the validity of the cost-benefit studies in the first place, stating that they rarely take into account the full complexity of the variables that may account for the results (Lyau & Pucel, 1995).

If cost-benefit analysis is an important HRD process, and if new concerns have been identified as a result of its use, then more in-depth information is required about the process and its outcomes. To do this, it seems necessary to examine both predicted and actual financial benefits, and to begin the process of understanding what the differences between the two might be and why they might differ.

Purpose of the Study

The purposes of this study were to:

a) Predict the forecasted financial of two HRD program options, using structured OJT and unstructured OJT.
b) Confirm whether the predicted financial benefits were actually obtained after the structured OJT program had been implemented.
c) Speculate the reasons why from a systems perspective there was a discrepancy between the predicted and actual financial benefits.

The importance of this study is to help show how the HRD benefit forecasting model can be used as a tool to both predict and evaluate HRD interventions. Also, to show that while cost-benefit analysis studies are critical for gauging the contributions of HRD programs, this process must be viewed as part of a broader organizational change process and, thus, is not an end in itself.

Framework: HRD Benefit-Forecasting Model

This study used the financial-benefit forecasting model, as developed by Swanson and Gradous (1988). There are three components to the model: a) performance value that results from the HRD program, b) the cost of the HRD program, and c) the benefits that result from the program. Table 1 presents the basic calculation of the model.

Table 1. HRD Benefit-Forecasting Model for Unstructured and Structured On-the-Job Training

UNSTRUCTURED OJT		STRUCTURED OJT	
$ Performance Value		$ Performance Value	
-	$ 0	-	$ Cost
$	Benefit	$	Benefit

Performance value is viewed in terms of training efficiency for both unstructured and structured OJT. Training efficiency is defined as the rate at which new tasks are learned by novice employees, to the extent that those employees can do those tasks without assistance from

others (Jacobs, 1994). There is an implicit cost of time that a novice incurs when they are new on a task and receive no structured assistance to reach a level of competent performance. When focusing on training efficiency, as is the case in this study, the HRD benefit-forecasting model takes this time savings into account in the performance value calculation.

Method

The method utilized in this study was the one shot case study research design (Campbell & Stanley, 1963). The HRD benefit-forecasting model was used to both predict the financial benefits between the two options and later to evaluate the actual benefits of the structured OJT option that was implemented. A combination of qualitative and quantitative data were collected to complete the information necessary for the performance value and cost. Interviews were conducted with five transaction processors, two managers, and two supervisors of the area to obtain the necessary data. Originally, the performance value was based on eleven processors being trained on two tasks: a) Dumping-in data and b) Entering miscellaneous payments.

Results

The results from the analysis are shown in Tables 2 and 3. Using the HRD Benefit Forecasting Model, Table 2 shows the predicted financial benefits. This table also shows that for each option, benefits were obtained by subtracting cost from performance value. Comparing the predicted benefits to be obtained from the unstructured and structured OJT options showed that the structured OJT option was substantially higher. From this information, one might surmise that the structured OJT option would be the preferred option for the organization. These results are consistent with other research examining structured versus unstructured HRD interventions (Swanson and Sleezer, 1989; Jacobs, Jones, & Neil, 1992).

Table 2. Predicted Financial Benefits of Unstructured and Structured On-the-Job Training

	Option #1 (n=11) Forecasted Unstructured OJT	Option #2 (n=11) Forecasted Structured OJT
Task 1: Dump-in		
Performance Value	$3,142	$5,498
- Costs	0	700
Benefits	$3,142	$4,798
Task 2: Miscellaneous Payments		
Performance Value	$3,927	$6,872
- Costs	0	700
Benefits	$3,927	$6,172

Table 3 presents the comparison between the predicted benefits and the actual benefits, using structured OJT. This information was gathered after one year had elapsed from when the training was to be used by the organization. Thus, this information represented what actually occurred, after the decision was made to use structured OJT, based on the predicted financial information originally given to the organization.

Table 3. Forecasted and Actual Financial Benefits of Structured On-the-Job Training

	Forecasted (n=11) Structured OJT	Actual (n=2) Structured OJT
Task 1: Dump-in		
Performance Value	$5,498	$1,000
- Costs	700	700
Benefits	$4,798	$ 300
Task 2: Miscellaneous Payments		
Performance Value	$6,872	$1,250
- Costs	700	700
Benefits	$6,172	$ 550

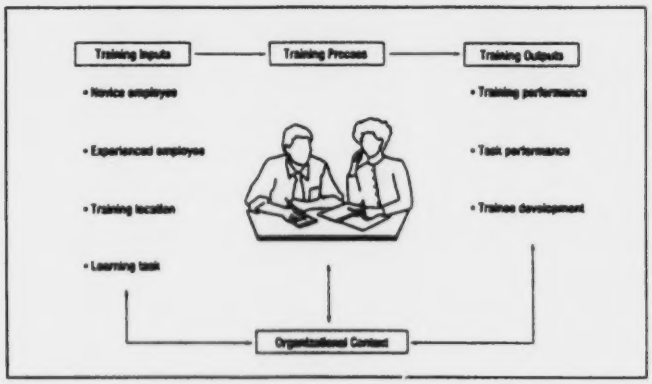
Table 3 shows that the predicted financial benefits had not been realized, because only two employees received the training, instead of the forecasted eleven. Thus, nine employees did not receive the training as expected, which would have increased the benefits of the training. The differences found between the predicted and actual financial benefits were accounted for by the on-going re-engineering efforts in the organization. In fact, this activity was known by managers, but the likely disruptions it would cause were not taken into account when predicting the differences between unstructured and structured OJT.

Discussion

Although it appears that structured OJT was originally forecasted to be the better option, subsequent analysis showed that not to be the case. In fact, from a financial perspective only, unstructured OJT could have been considered the better option, given that only two employees would have been trained in the period of the analysis. Certainly, organizations must select training programs other than financial benefits alone. For example, one can only surmise the financial benefits that were likely obtained through the avoidance of errors, even though only two employees received the training.

At the same time, in comparing predicted and actual financial benefits, there should be greater precision in determining the likelihood of the predicted situation actually occurring. As shown in Figure 1, Jacobs & Jones (1995) present a system view to help determine the components that comprise structured OJT. The system view presents the inputs, processes, and outputs of structured OJT. The system also reflects the organizational context in which the structured OJT exists, or any training approach for that matter. Thus, perhaps the affects of the re-engineering effort could have been raised as an issue at the beginning of the project. Certainly, if the project had not proceeded in a different direction, at least the issue could have been more effectively addressed by managers during the time structured OJT was expected to be used. Not all issues can be resolved in organizations; but, their undesirable affects can often be lessened through advanced knowledge of them.

Figure 1. Structure OJT as a System



Conclusion

Current research suggests that organizations desire to know of the economic returns made on their HRD investments (Lyau & Pucel, 1995). Determining the predicted and actual financial benefits is the most precise way of confirming this information. But, understanding the differences between the predicted and actual financial benefits will likely be hindered without using a theoretical framework, such as a systems view. Systems theory is well-suited to the planning and use of HRD programs. In this case, even though full benefits of the forecast were not achieved, the structured OJT could not be claimed as a loss for the organization, because the skills learned by the two processors were undoubtedly useful to the organization nevertheless. But much more impact could have been obtained with additional information, aside from the direct questions asked by the financial forecasting model alone.

Organizations naturally want to know "what could be" and "what was" the economic benefits of using HRD programs. The question asked by this organization supports the findings in a recent survey conducted by Gayeski (1995) that identified a trend "toward applications in business settings with "bottom line" results." (p.9) This question of what is the bottom line is becoming standard practice for HRD practitioners. If investments in HRD are to taken seriously by companies, all levels of the organization must be responsible for its impacts. Specifically, top management must see the economic relationship between increased organizational productivity and their investment in training (Carnevale and Schultz, 1990). To incorporate a systems approach using the HRD Benefit-Forecasting model can help answer this question. The "bottom-line" is that HRD practitioners can only plan for what is forecasted to happen. Unless an organization has full information, the predicted and actual benefits will differ nearly all the time.

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Diversity: A Double-Edged Sword

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This opinion paper presents the politically correct notion of workforce diversity through two differing perspectives, stimulating more realistic thinking about its attendant issues. A cautionary examination of some of the dimensions of this popular trend are designed to lead one to recognize the serious and timely need for empirical study and science-based research upon which to base management decisions. In the absence of research, opinion guides, and diversity remains a potential manager's nightmare.

The following paper is not politically correct. As a matter of fact, one could read this piece and conclude that it is anti-diversity. Not so. The objective of this paper is to stimulate thinking about an issue that many nod their head to but in reality there is very little real commitment given. Part of the problem is that there is not a clear understanding of what it is to which this commitment is expected. For both academician and practitioner, agreement to a construct for diversity is a necessary first step.

Commitment to diversifying the workforce demands more than raising one's hand in a staff meeting and saying this is a good idea. Committing to diversification of the workforce requires thoughtful dedication to the concept, however nebulous it may be, as well as to the implementation. Without a good deal of both you may be in danger of opening the proverbial can of worms. *But how can managers be expected to commit to a concept that is propelling forward from its own popular inertia within a dearth of empirical support?*

Intuitively, diversity sounds good, particularly for today's organizations most of which are facing paradigm shifts to deal more effectively with a changing workforce (Johnston & Packer, 1987). In the midst of re-inventing and re-engineering, the idea of employees from differing cultures, ages, ethnic origins, and genders working collaboratively for the goals of the organization sounds attractive. But, diversity is not unlike a handwoven tapestry, depending on which side you're looking at, the threads form a very different picture. From one perspective, diversity in the workforce is a logical step for any organization dealing with change processes and transformation. The idea of diversity dangles like bait, offering itself as a potentially powerful source of synergism for creative problem-solving to organizations facing change. This positive view depicts diversity as capitalizing on work team member differences as a source of innovative and fresh perspectives—precisely what today's organization in transition needs.

The other side of the tapestry, however, reveals a different picture. Diverging from the cookie cutter-mold employee, workforce diversification can create a manager's nightmare. In other words, without diversity management, comprehensive and dynamic, diversity by itself can put the organization in jeopardy. Thus, a double-edged sword emerges—a dangerous metaphor for diversity: One edge is a necessary evolutionary step in organizational development; the other reveals diversity as a potential impediment to organizational development and progress.

Viewing diversity from two differing perspectives, as the sword metaphor offers, while not as politically comfortable as a unilateral view, is timely and necessary. This paper examines briefly some dimensions of diversity in organization transformation and some implications for further research. The intent here is not to play the devil's advocate, but rather to stimulate the need for further thinking about diversity, acknowledging the difficulty when research has been limited.

The Metaphor Changes

While a double-edged sword may be the metaphor of choice for this author, Americans have traditionally viewed diversity with emphasis on the assimilation of differences, i.e., the *melting pot* metaphor. Here, the ethnic and racial differences were pureed into a type of American standard.

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Realistically , this melting pot perspective of diversity is probably a myth—something most people would like to believe exists. More than just a metaphor at the workplace, this melting pot demanded voluntary conformity from employees in order for them to aspire to succeed (Thomas, 1990). Those days are over, according to Thomas, and he gives three reasons why the melting pot is not a good metaphor in business:

> First, if it ever was possible to melt down Scotsmen and Dutchmen and Frenchmen into an indistinguishable broth, you can't do the same with blacks, Asians, and women. Their differences don't melt so easily. Second, most people are no longer willing to be melted down, not even for eight hours a day -- and it's a seller's market for skills. Third, the thrust of today's nonhierarchial, flexible, collaborative management requires a ten- or twenty-fold increase in our tolerance for individuality (p. 108).

The realities faced today are no longer the realities that affirmative action, brought about by the 1964 Civil Rights Act, was designed to correct. It was initiated to fix prejudice. As social practice, not law, affirmative action played an essential getting-in-the-numbers role, helping to create the foundation necessary for diversification of the workforce. But affirmative action is an artificial, transitional intervention intended to give managers a chance to correct an imbalance, a mistake (Thomas, 1990). Diversification is not affirmative action. Diversification is evolutionary; affirmative action is reactionary. Affirmative action institutes a temporary imbalance, forced diversity, in order to reach a new balance (Gardenswartz & Rowe, 1993). Once the numbers are corrected, according to Thomas, affirmative action alone cannot cope with the remaining long-term task of creating a work setting geared to maximizing individual effectiveness and facilitating upward mobility of all kinds of people (1990). And, essentially, Thomas has hit on precisely what effective management of workforce diversity would seem to be about.

It has been eight years since the U. S. Department of Labor published its Workforce 2000 report exposing changes taking place in the economy and the composition of the workforce. It predicted the workforce slowly become more female, older, more disadvantaged with greater ethnic and racial diversity (Johnston & Packer, 1987). The implications to all of this change are legion. Needed will be new forms of leadership and management, greater knowledge of organizational culture and subcultures, negotiating skills, and stronger people skills.

Today, in many places, the predictions of the 2000 report are a reality. However, human resources experts estimate that only 3 percent to 5 percent of US corporations are diversifying their workforces *effectively* (Rice, 1994). This emerging reality has converged with the advent of many other changes impacting organizations at both the individual employee and organizational levels. Helgesen (1990) alleges, for example, that the hierarchial ladder is out; the shape of the new negotiating table is round, the team is the new star and empowerment is the name of the game.

One need but look around to realize that tomorrow's organizations will probably be flatter, leaner, and more aggressive. The current trend to simplify and tighten the organization will continue (Boyett & Conn, 1991). Organizations are realizing that the challenges of the nineties demand the fullest potential of their human resources that they can muster. In this regard, human resource managers are hampered by the almost complete absence of empirical research showing that diversity per se, represents an actual or potential competitive advantage in organizations. While the potential may exist for the diversification of the workforce to act as a double-edged sword, an *effectively managed* diverse workforce, nevertheless, continues to offer potential, a compelling promise of competitive advantage for organizations now and the next century. But, for some organizations to be able to see the long-term value of diversity, it may be necessary for them to shift paradigms, to go beyond *number changing* and into assessing their organizational *values*. It may be expensive. It may take a long time. It may make people uncomfortable.

The Kaleidoscopic Work Culture

Organizational culture is a network of assumptions, expectations and behaviors learned and shared over time (Sheinberg, 1994). Diversity in the workforce is essentially the organizational culture.

Important, but often overlooked, are the subcultures in an organization. A subculture is a set of values shared by a minority, usually a small minority of the organizations's members. Subcultures can weaken and undermine an organization if they are in conflict with the dominant culture or the overall objectives. Sheinberg (1994) describes an organization's culture as often illusive, very powerful, tangible, both overt and covert, durable, self-sustaining and defensive, and, along with the various sub-cultures, shaping everything that people in the organization think, behave, and believe to be true.

Research such as that by Hofstede (1983), identifying dimensions of culture, is useful when trying to understand organizational behavior and the potential ramifications of a diverse workforce. Power distancing, uncertainty avoidance, individualism, and masculinity/feminity are some of the basic dimensions that Hofstede found to differentiate cultures. Power distance is the extent to which less powerful members of organizations accept the unequal distribution of power. Individualism is the tendency to take care of oneself and one's immediate family versus collectivism characterized by a tight social framework in which people distinguish between their own group and other groups. Another dimension of cultural difference is uncertainty avoidance or the extent to which people feel threatened by ambiguous situations and the degree to which they try to avoid these situations. The fourth dimension identified by Hofstede is masculinity with its opposite pole, femininity. This dimension expresses the extent to which the dominant views within a culture emphasize assertiveness, money and things, not caring for others, quality of life and people.

Organizational culture evolves, changing through its own inertia, or by design. The process of changing culture is a long term effort that requires continual articulation, reinforcement and practice (Sheinberg, 1994). Designing a kaleidoscopic culture is important work since it is culture, according to Sheinberg, that creates meaning in any organization. Diversification of a workforce changes the culture. Therefore, it would seem that a continuous accommodation through an organizational systems approach must occur in order to facilitate diversity's inherent dynamics. This reality is part of the diversity sword's "other edge"; it can cut and do damage. Organizations need to approach diversity programs with caution, sincerity, and commitment; otherwise, the consequences of launching a diversity program can exacerbate problems, creating chasms and barriers too wide to cross.

Synergy as a Central Issue

To be most effective in complex endeavors, synergy is required; in organizations one must be able to collaborate not just with peers, but with technicians, and those from other specialities, organizations, and countries (Harris & Moran, 1991). This is the basis for the popular view of workforce diversity: *diversity equals positive synergy*. The term, synergy, reflects the equally popular notion that the "whole is greater than the sum of the parts." "The Third Wave Culture", the social revolution characterized by Toffler (1980), demands such collaboration. However, there is no empirical evidence to support the idea that diversity always equals positive synergy.

Harris and Moran (1993) analogize synergy as 2 + 2 = 5 instead of 4, but given various cross-cultural barriers such as age, gender, ethnicity, or religion, for example, cultural synergy may be the equation of 2 + 2 = 3. According to Harris and Moran, progress is made if the sum of cultural synergy is not negative. It doesn't have to be positive, simply not negative. A negative result of synergy implies barriers to progress, for example, obstacles to effective communication within the group, personality conflicts, or inability to reach consensus thus causing the group to be less productive/creative rather than more.

One study conducted at the University of California at Irvine and at the Stanford Business School showed white males becoming less attached and committed as the workplace became more diverse in terms of race and gender (Ritkin, 1994). Reports from various organizations indicate that heterogeneous work teams often greatly underperform homogeneous teams because heterogeneous teams lack the ability to recognize and understand the inherent differences of each member (Sheridan, 1994; Nicholas, 1994). More empirical research is needed on the impact of diversity on work teams/groups, particularly since teams are part of the new organizational look described throughout the literature—a look whose culture values creativity and innovation (Drucker, 1985).

The essence of synergy is to value differences, to respect them, to build on strengths, to compensate for weaknesses (Covey, 1994). There is no compromising in true synergy; nothing is given up either. Synergy emerges from the differences of the group members. What model works best for teams: Homogeneous or heterogeneous team membership? Compromise or true synergism? Conflict resolution or congruence of common values? Apparently, the jury is still out on teams.

In addition, some cultures are synergistic and their people inclined toward cooperation, but others are not, and their people seem to be often in conflict with one another (Harris & Moran, 1993). An interesting research effort might be to compare the characteristics of "high synergy" and "low synergy" societies to organizations or teams.

Approaching a Diversity Construct

Current approaches to diversity basically fall into three categories: 1) the ***traditional approach***, an affirmative action-increase-the-numbers model which assumes that a melting pot assimilation of differences will occur, 2) the ***understanding diversity approach***, a model which enhances employees' abilities to accept, understand, and appreciate differences among individuals, and 3) the ***managing for diversity approach***, an emerging model which combines some of the traditional approach with the kind of systems changes in the second model that effective diversity programs might require in order to be successful. According to one recently conducted rare, empirical study by Rynes and Rosen (1995), organizations that embrace a broader, more *holistic* definition of diversity are more inclined to see success regarding their diversity training initiatives.

The author views the third approach, *managing for diversity*, as the most promising. Such a view would see the objective of managing diversity as creating an environment that fully taps the potential of all individuals, in pursuit of organization objectives, without giving advantage or disadvantage to any person or group of persons (Thomas, 1990; Gardenswartz & Rowe, 1995). This approach comes closer to the more holistic definition recommended by Rynes and Rosen (1995).

Gardenswartz and Rowe (1993) see diversity as having distinct stages in its evolution within an organization: *affirmative action, valuing differences, and managing for diversity*, playing an integral part, overlapping both in philosophy and practice. They see these stages or diversity components as types of *openers*: affirmative action opens doors, valuing differences opens minds (changing attitudes, beliefs), and managing for diversity opens systems, affecting managerial policies and practices. They further suggest that each of these aspects of diversity may have a different driver: affirmative action driven by legal considerations, valuing differences in employees driven by ethical considerations, and managing for diversity being driven by organizational strategic plans and goals.

Promising or not, is such ideal diversity management realistic? Perhaps managing for diversity *is* a *process* rather than a solution, *enabling* rather than controlling, and perhaps it *is broad* in dimensions rather than limited to race, gender or ethnicity as suggested by Thomas (1990). But, such a diversity management approach *assumes* and *requires* that both organization and individual will do some adjusting. Managers proceeding forward with cultural and systemic interventions and initiatives at the individual and interpersonal levels, without the requisite research base and/or without the level of necessary commitment, may make costly decisions.

For example, strategic plans are often thought to be the solution for accommodating a diversifying workforce. However, what is really needed is strategic thinking, an on-going process not constrained by a static plan. Accommodating a diverse workforce requires planning, thinking, strategizing, and sensing, not just filling out forms and answering surveys. When data *is* collected, tying survey results back to specific corporate values, policies, and programs is crucial for long-term success (Baytos, 1992; Rynes & Rosen, 1995).

In diversifying a workforce, the human dynamics of social interaction are too complex to be adequately handled by any one model (Miller, 1994). For example, Sheinberg (1994) advocates the need for sensing and intuitively anticipating, playing "what might happen if?". This approach fits well with managing change processes. The work of Dinges and Maynard (1992) presents various comparative frameworks for use in the analysis of cultural differences within organizations. Adler (1980) provides one of the more thoughtful approaches to intercultural organizational behavior,

focusing primarily on intercultural management tools.

Conclusion

Diversity as a construct, like leadership, remains elusive, increasing the difficulty of what is already a complex endeavor. Baytos (1992) warns that workforce diversity may be an area where even angels fear to tread. Diversity on any level and in any situation is not easy. The challenges represented by workforce diversity are complex and delicate. According to Baytos, the required change processes for an organization to successfully launch a workforce diversity program are labor intensive and costly. Quick fix approaches don't work. The evaluation of both personal attitudes and the organization's work culture are both necessary and risky "cans of worms". However, realistic, sensitive, planned and comprehensive workforce diversity initiatives presume to greatly benefit all employees.

This paper suggests several areas for further research. First, the concept of synergy needs to be studied particularly as it relates to various types of group dynamics, work group compositions, and teams. Second, research is needed for a more explicit construct definition of such terms as "diversity", "valuing diversity", and "managing for diversity". Third, further research is needed regarding specific types of work tasks and the working environment compared to types of individual workers, types of leadership or supervision, and/or types of collaborations required for getting the specific work accomplished. For example, is an effective diversity manager different from an effective manager in general? Fourth, greater research is needed in the area of diversity training and its evaluation, providing diversity trainers with more to offer organizations than awareness and sensitivity training. Also, research could address the causal relationship questions such as to what extent does training the workforce of an organization benefit that organization in terms of cost to benefits? Another area for future research might be to build on what is known of inter- and intra-cultural values with western culture models of supervision and communication.

It would seem that under diversity issues lay more profound issues relating to values. Further research is needed to develop a stronger link between workforce heterogeneity and various interventions and outcomes aimed at bringing about congruence.

Personal uniqueness, critical to identity and feelings of self-worth, requires nurturing and development in order for it to lead to growth. An organization is only as good as its employees. Thus, it would seem, that a program which develops and nurtures *all* of its employees becomes enhanced in the process. The bottom line—organizations need to know what they're getting into before embracing workforce diversity as any other bandwagon.

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Career Development and Stress of Female Faculty Members at Pittsburg State University

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Career development is important for today's working women because it can assist them in preparing for the future. The purpose of this study was to identify behaviors and stress factors at the different life stages of female faculty members at Pittsburg State University.

A career is important because it represents the person's work life setting and affects their quality of life. For women, having a career means being able to express their professional selves over their lifetime with a desire for just treatment and compensation for their efforts. Career development is very important for todays professional female staff member because this can assist them in preparing for the future.

Many women in professional jobs face pressure from the dual responsibilities of their jobs and family. This often will affect their stress level and their behaviors. This study attempted to relate aspects of stress to career stages of Pittsburg State University (PSU) female faculty members.

Problem Statement and Theoretical Framework

The Dalton Model with consideration for other scholars work, such as Arnold and Feldman, was used as the theoretical basis for this study. The "age-based" model suggest that individuals will be faced with different career tasks and psychological issues at different age-career stages. The individual in each stage must control their work activities and solve these psychological issues in order to develop new skills and grow professionally (Papalia and Olds, 228).

The Statement of the Problem for this study was:

> Women in professional jobs face pressures from dual responsibilities; their jobs and family. This may increase their stress level and affect their behaviors. This research is needed to identify career development and stress factors of PSU female faculty members.

The Research Questions Addressed in this study were:

1. How do career tasks differ during career development for different life stages?
2. How does stress differ during career development for the different life stages?
3. How do social characteristics differ in career development for the different life stages?

Methodology

This research was designed to acquire information about the career development of women faculty members at PSU. Descriptive research was chosen as the best method for addressing the problem and answering the research questions. The data was collected using a structured questionnaire developed by the researcher based on Dalton's two models; 1) Career Stages and Career Concerns and, 2) Life and Family Stages (Papalia and Olds, 228 & 518). The population consisted of both administrative and instructional staff members. Classified female staff members were not included. Eighty-three out of 125 questionnaires were returned for a 66.4 percent response. Thirty-five respondents were from administrative positions, with forty-eight respondents in instructional positions.

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Results

Thirty-nine percent of respondents were in the 31 - 40 age category, with another 30 percent in the 41-50 year category. Thirteen percent of the respondents were in the 20 - 30 and 51-60 year categories. Only 5 percent were 61 years of age or older.

Twenty-nine percent of the respondents had attained a doctoral degree with 43 percent, the highest percentage, completing the master degree. Only 18 percent had less than a master degree. Sixty-five percent of the respondents were married with only 16 percent having never been married. However, 34 percent had no children. Only 20 percent of respondents had more than two children.

Twenty-four percent (42) of the respondents indicated that job load was a major cause of stress, 21 percent(37) cited job demands, and 13 percent (23) indicated that finances were major causes of stress, as shown in Table 1. The greatest number of respondents indicated that job security was not a problem causing job stress. Pay inequity was cited as a major cause of stress by 18 (10 percent), and as a mild cause of stress by 33 (16 percent), but not as a problem by 27 (12 percent). Other causes of stress added by respondents included balancing family/job, time for scholarship, obtaining Ph.D., adolescent child, family member illness, no leisure/play time, and isolation.

Table 1. Causes of Stress

Causes	Major		Mild		Not a Cause	
	N	%	N	%	N	%
Financial	23	13	36	17	17	8
Job security	13	7	30	14	33	15
Job demand	37	21	30	14	12	7
Job load	42	24	26	13	9	4
Recent change	13	7	22	11	37	17
Pay inequity	18	10	33	16	27	12
Child care	9	5	12	6	57	26
Family demand on time	19	11	29	14	29	13

Note: totals exceed 100% due to multiple responses

A difference was found in the causes of stress related to age groups. In the 20-30 age group, 28 percent indicated that finance was the largest cause of stress, while in the 31-40 and 41-50 age groups job load was the largest cause of stress. More individuals in the 31-40 age group cited job security and pay inequity as a cause of stress than in any other age groups. Nearly 50 percent of all respondents disagreed or strongly disagreed that their chances job advancement were the same as it was for males.

Respondents were asked what they did to help relieve stress. Talking with others was cited most often (25 percent) followed by walking (22 percent), exercising (17 percent), and working (16 percent). Other responses added included socializing with friends, early to bed, watching TV, reading fiction, praying, travel, cooking, writing, doing artwork, gardening, homework, quiet time alone, and vacation. Respondents were also asked who helped them the most in handling stress. Their husband was given most often (41 percent) followed closely by friends (39 percent).

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Respondents were asked to estimate the amount of time they spent after work on other activities. The greatest amount of after work time was spent on house work followed by hobby or recreation. Only 29 respondents (35 percent) reported that they spent time after work on continuing education.

Forty-seven percent of respondents indicated that career development was not critical as their careers were well established, as shown in Table 2. However, 40 percent indicated that career development was essential and 10 percent indicated it was very important as their careers were in early stages. Respondents were asked about the clarity of their career plans. Results are shown in Table 3. Over 45 percent indicated they had only a broad idea of their career plans.

Table 2. Perception of Career Development Importance Related to Age

Importance	Age					
	Total	20-31	31-40	41-50	51-60	60+
Not critical, career well established	47	18	28	56	100	75
Essential, beginning career	40	55	38	20	0	0
Very important, thinking about career change	11	9	16	8	0	25
Very important, not sure of career plans	10	18	6	16	0	0
No response	5	0	13	0	0	0

Table 3. Clarity of Career Plans Related to Age

Clarity of Career Plans	Age					
	Total	20-31	31-40	41-50	51-60	60+
Not sure how to develop career	10	19	16	4	0	0
Have broad idea of career plans	47	55	47	56	36	0
Have definite future career plans	35	26	31	32	46	75
No response	7	0	6	8	9	25
Not applicable	1	0	0	0	9	0

Respondents were asked to check which of a list of career related task they were currently facing, as shown in Table 4. The most frequent task checked was reassessing my career abilities and interests, by 38 of 83 respondents. Obtaining an appropriate education, and reassessing their career abilities and interests were the most frequent task checked by respondents in the 20-31 age group. Reassessing career abilities and interests, being a mentor, and taking on managerial responsibilities were

the most often checked tasks by respondents in the 31-40 age group. Reassessing career abilities and interests and becoming an independent contributor to the organization were the most often checked tasks by respondents in the 41-50 age group. Reassessing career abilities and interests and becoming involved in civic and political arenas were the tasks most often checked by respondents in the 51-60 age group. Becoming an independent contributor to the organization was the career task most often checked by those older than 60.

Table 4. Career Task Related to Age

Career Tasks	Age					
	Total n=83	20-31 n=11	31-40 n=32	41-50 n=25	51-60 n=11	60+ n=4
Finding the right career	5	2	2	1	0	0
Obtain an appropriate education	13	4	4	5	0	0
Choosing a special area of competence	12	2	4	4	2	0
Becoming an independent contributor to org.	21	2	8	9	1	3
Reassessing career abilities and interests	38	4	16	14	4	0
Being a mentor	23	1	11	6	4	1
Taking on managerial responsibilities	20	2	10	6	2	0
Making strategic decisions	14	0	6	5	2	1
Becoming involved in civic/political arenas	20	0	9	6	4	1
Developing subordinates for leadership roles	12	0	5	5	2	0

Respondents were asked to indicate their level of agreement with a number of statements related to career development, as shown in Table 5. Seventy percent of all respondents either agreed or strongly agreed that they had a clear picture of what they wanted to do in the future. Only 24 percent agreed and 6 percent strongly agreed that they needed professional guidance for their careers. Forty-seven percent of respondents indicated that they had a strong desire to pursue additional education, whereas 25 percent disagreed or strongly disagreed with that statement and 15 percent were uncertain.

Respondents were asked if child care interfered with their career. Over 50 percent responded that this was not applicable. Of the remainder, 7 percent agreed and 7 percent strongly agreed, whereas 17 percent disagreed and 11 percent strongly disagreed with that statement. They were also asked if they had the same chance for advancement as a male with a similar job and experience. Thirty-five percent agreed with this statement, 12 percent were uncertain, and 49 percent disagreed.

Respondents were asked if their spouse or partner was supportive of their job. Only 2 percent disagreed with that statement. They were also asked if their spouse(partner) should assist more with the work at home. Over 40 percent agreed or strongly agreed with that statement, and only 22 percent disagree or strongly disagreed.

The statements related to career development were also analyzed related to the different age groups of the respondents. Respondents in the younger age groups expressed a stronger desire to

continue their education, and they also indicated a stronger level of agreement with the need for professional career guidance. Respondents in the older age groups indicated that they had a clearer picture of what they wanted to do in the future.

When analyzing the data according to the different age categories of this study, care had to be taken because of the relative low number of respondents in some age categories. There were only 4 respondents in the above 60 age category, 11 in the 20-31 age group, and 11 in the 51-60 age group. This was also taken into account in developing the following conclusions.

Table 5. Attitudes Toward Career Development

Statement	NA or No reply	SA	A	U	D	SD
Have strong desire to continue education	13	24	23	15	13	12
Clear what I want to do in the future	3	31	39	19	6	2
Need professional career guidance	12	6	24	12	27	19
Spouse(partner) supportive of my job	30	48	16	4	0	2
Spouse(partner) should assist more at home	33	17	24	4	12	10
Child care interferes with career	56	7	7	2	17	11
Have same chance for advancement as male	4	16	19	12	31	18

Conclusions

A greater proportion of the female faculty members were in the younger age groups. The greatest percentage of respondents were in the 31-40 age group. Only 29 percent of these individuals had obtained a doctoral degree. It would be interesting to see how these percentages compared with male faculty members in similar positions at the university.

Although only 16 percent of respondents had never been married, 34 percent had no children. Even considering the low number of respondents in the 20 - 30 age group, this may indicate that a number of female faculty members do not have children, or delay having children until an older age. Of those having children, the family size tends to be small, which may again indicate that child bearing is delayed for female faculty members. Child care assistance may be beneficial to some faculty members as nearly 15 percent of respondents agreed or strongly agreed that child care interfered with their careers.

The greatest percentage of respondents strongly agreed that their spouse(partner) was supportive of their job, which should help lessen stress. However, they also agreed that their spouse(partner) needed to help more with the work in the home, which may be a cause of stress.

The administration of Pittsburg State University should address the stressors of the female faculty members. The greatest causes of job stress were job load and job demand. Pay inequity and job security was not often reported as a cause of stress. However, it was reported frequently enough, especially by younger faculty members, that these two issues do demand attention.

More specific negative effects of heavy job loads and job demands were confirmed by the number of respondents who reported that they did not have adequate time to participate in professional or social organizations, for hobbies and recreational activities, or to spend time with friends. A lack of

time for these three major factors in their lives will continue to create additional and perhaps unneeded stress, unless efforts are made to reduce heavy loads and job demands.

Exercise has been reported as effective in helping to reduce the stress levels of individuals in other studies. A number of respondents reported that they did use exercise and walking as ways they reduced their stress. However, this was reported by less than 30 percent of respondents, while only 27 percent indicated that they exercised daily and another 25 percent exercised only twice a day. Efforts to involve the female faculty members in activities promoted by the University involving exercise should be helpful.

All age groups of respondents indicated that reassessing their career abilities and interests was a career task that they were currently facing. Respondents in the younger age groups were move involved in finding the right career, and obtaining an appropriate education, while those in older age groups were more involved in making strategic decisions, becoming an independent contributor to the organization, and in being a mentor.

Career development assistance would be of benefit to the female faculty members of Pittsburg State University. However, as would be expected, respondents in older age groups felt that career development was not as important. Career guidance as well as assistance in professional development should be provided, as reflected by the relatively low number of respondents who had doctorate level degrees.

Encouragement is needed for female faculty members to participate in professional organizations. This is especially important for younger faculty members who more often agreed that they did not have adequate time to participate in their professional organizations.

The physiological issues most often facing the female faculty members at Pittsburg State University correlated very closely with those in the Life and Family Stages Model presented in the 1987 Annual: Developing Human Resources. Developing a self-identify and balancing one's own needs with those of others was often confirmed as a issue for younger individuals, while reassessing current values and commitments was most often reported during the middle-life transition life stage. Older faculty members reported that a major issue was the development of new hobbies, activities, and friendships.

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The Relationship of Training and Team Diversity on the Productivity of Service Technicians at Bell South

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This study asks two questions: What impact does a total quality management training program have on productivity, what variables differentiate the most productive work teams from the least productive work teams? A total of 133 teams, encompassing 1,780 employees from Bell South, took part in the study. The data revealed that total quality management training and its delivery coupled with the level of experience of the employee transcend the issues of a diverse American workforce.

The increasing diversity of the American workforce coupled with the rapid technological advances taking place today, particularly in the telecommunications industry, have forced many American companies to look for alternative methods to manage their business more effectively and increase productivity. The implementation of total quality management programs has become one such alternative method. This represents a new approach to organizational design and the work ethic. Some view the total quality management process as both a social revolution in the workplace and a rigorously effective approach to organizational success (Hutchins, 1992; Peters & Austin, 1985).

The task of developing effective work teams, one primary key to total quality management, is easily achieved by a homogeneous society such as Japan's (Dietrich, 1991; Okawara, 1990). Yet, in order to achieve similar results in the United States, several issues involving the diversity of the American workforce must be addressed. Such issues as race, age, and gender, as well as work experience and training concerns brought about by the changing composition of this workforce, may impede the implementation of total quality management programs in the United States. It is this issue of diversity in work groups, therefore, that has emerged as one of the most discussed issues in the workplace in America today. As D'Souza (1991, p. 58) points out, "the United States is rapidly becoming a multiracial, multicultural society in a way that it has not been before. Immigration from Asia, Latin America, and the Caribbean has populated the landscape with an array of yellow, brown, and black faces."

Some analysts, however, consider that this concern for the diverse workforce, and the thrust to increase productivity through improved quality, is more the result of a reactive need to produce quality goods at a competitive cost rather than a proactive desire to improve business and human conditions. The result may be, in many cases, hastily prepared training programs on total quality management that neither serves the intended purpose nor provides the results sought. The total quality management programs may not be administered in a manner that achieves the highest payoff for the training dollars spent.

In sum, these two issues: the impact on productivity of a total quality management training program, and the team characteristics of a diverse American workforce, collectively identify the focus of this study.

The Problem

Bell South, a regional telecommunications company operating in the southeastern United States (known as Southern Bell until 1995), has a strong philosophical and organizational commitment to continually improve the quality of its products and services. Recent advances in telecommunications technology now provide business customers with the option to bypass the local telephone network. This decision will soon be also available to residential customers. The importance of maintaining satisfied customers becomes a critical issue in order to prevent an eroding customer base. Total quality management (TQM), a process emphasizing teamwork, has been implemented through a company-wide training program to achieve this goal.

The key, however, may lie in the ability of diverse work teams to achieve a common goal that will benefit the organization. Whites will remain the major labor force in the United States through the Year

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2000. Yet, their absolute numbers will increase only 15%, compared with a 20% increase for blacks and a 74% increase for Hispanics. These facts, coupled with heavy immigration, will make the Hispanic growth rate faster than that of any other race or ethnic group in this country.

One of the most striking changes in the labor force in the United States during the 1990's will be the increase in the number of women employed full time. Duster and Nasatir (1990, p. 19), addressing the issue of gender point to, "the feminization of the workplace that has occurred during the past decade [and how] women are likely to account for more than 60% of the growth in the labor force during the next ten years." This trend should lead America into the new millennium with a workforce of equal proportions of male and female workers, particularly in the white-collar professions (Fernández, 1991; Hamada, 1990; Hopkins, Nestleroth, & Bolick, 1991; Kovach, 1992; Naisbitt & Aburdene, 1990).

The importance of the issue of age in the American workforce cannot be overstated. By the end of the century, as Hopkins, Nestleroth, and Bolick (1991, p. 19) point out, "while the 20 to 29 year-old group will shrink by 17 percent, the number of people aged 35 to 47 will climb by 38 percent and the number between the ages of 48 and 53 will jump by 67 percent."

Furthermore, the diversity of the American population, and consequently of the American workforce, in terms of race, age, and gender, coupled with its individualistic approach to business, may impede the successful implementation of total quality management programs involving teamwork. The telecommunications industry, like most large corporations which generally resemble the make-up of the community they serve, is especially affected by this diversity.

This study examines the impact of this diverse milieu upon the effectiveness (productivity) of work teams, an important element to total quality management implementation in organizations. It also examines the impact of TQM training, and the scheduling of this training on the productivity of work teams.

Research Questions

This study provided specific knowledge of worker productivity based on data from a representative sample of employee work teams (Service Technicians), from a single telecommunications company that provided the same TQM training program for all the teams. Two basic research questions were investigated: What are the major factors which impact productivity of Service Technicians as it relates to their ability to meet customer service requirements? More specifically, what are the variables that differentiate the most productive work teams from the least productive work teams?

The variables investigated in this study are five work team diversity characteristics (race, gender, age, years of experience as service technicians, and years with Bell South), and two training variables (attendance in a TQM training program, and the proximity of training completion by individual team members). These variables were assessed as to their impact upon the productivity (service order completion) of the service technicians.

Most research of work related issues is conducted within an area or region using data gathered from several different companies and industries (Hull, Friedman, & Rogers, 1982; Kalleberg & Leicht, 1986; Kalleberg, Lincoln, Hanada, & McBride, 1990), instead of making specific determinations about one company within one industry. Other studies have combined national samples of firms in a given industry (Kelley, 1990), not taking into account that training packages used in different companies may vary greatly. Still other studies which research productivity results have relied solely on the qualitative approach, seeking to discover the work relations of individuals within particular organizations and corporations (Kelley, 1990). Many major American companies now embrace some form of total quality management (Lawler, Mohrman, & Ledford, 1992) yet the amount of research to determine specifically which practices most directly impact productivity is scarce (Colclough & Tolbert, 1992; Kahnweiler, 1991; Lawler, Mohrman, & Ledford, 1992). This study will, however, provide specific knowledge of worker productivity based on data collected from a representative sample of employee work teams, performing both at the top ten percent and at the bottom ten percent in productivity, from a single telecommunications company and provided the same total quality management training program which will be ultimately required by all employees.

Methodology

Pilot Study A pilot study was conducted to assess the feasibility of the proposed research. Seventeen work teams from Dade County, Florida, were identified involving a total of 231 workers. Data were collected on the demographic composition of the work teams, including race, gender, age, and productivity results of these teams for two years, 1992 and 1993. This information served to create a productivity scale to rank the teams from the most productive teams to the least productive teams. Additionally, the attendance date of each individual to the TQM training, *The Quality Advantage*, was recorded.

From the pilot study it was determined that variables regarding team composition, such as years of work experience as service technicians, and years with the company, were important variables. The decision to include these additional variables enhanced the investigation, and allowed a more accurate prediction of which variables may have the greatest impact on the differences in productivity results of the work teams.

Population and Sample The total population of this study represents the service technicians of Bell South. This group of employees was selected as it encompasses one of the largest group of employees, and ensures the ability to utilize the specific productivity results of one job classification. This served to provide a level of clarity without contaminating the findings with extraneous variables such as differing job classifications, work responsibilities, and difficulty of tasks. Additionally, it eliminated the question of group size as a possible variable, since the work teams are evenly apportioned in size, between 12 and 16 team members, a range normally considered as a small group (Hogg, 1992; Katzenbach & Smith, 1993).

All service technicians are required to meet the same minimum technical training guidelines to gain entry into, and retain, this job. Their jobs involve complex technical skills, and at times may require multiple team member participation to complete a required task. The teams are given the flexibility to call on other team members to help in the completion of assigned tasks. This work flexibility, therefore, also makes this type of job classification very attractive for a study of the productivity of teams.

A total of 679 teams, comprising approximately 9,500 employees, were identified for the job classification of Service Technicians throughout Southern Bell. This study analyzed the impact of the selected variables on productivity by comparing the collective results of those teams in the upper ten percent with those in the lowest ten percent of the population. Of the 136 teams selected, three teams, one from the top ten percent and two from the bottom ten percent, were discarded, as they included classifications other than service technicians. Thus, 133 teams (1,780 service technicians) were subjected to the analysis, 67 from the top ten percent and 66 from the bottom ten percent. Table 1 shows the demographic characteristics of the selected teams including the standard deviation and *t* test results for the significant variables (age, time on job, and years with company).

The study is causal-comparative, as it examines the effect of the selected variables, on productivity, without the ability of the researcher to manipulate any of the variables. Furthermore, this type of research does not allow for the random assignment of subjects to groups formed by combinations of the variables (Gay, 1992). Since the study seeks to identify the variables that best differentiate the most productive teams from the least productive teams of Service Technicians in Bell South, *t*-tests were conducted to confirm significant mean differences (see Table 1). To facilitate the prediction of effective work teams, a discriminant analysis procedure was also performed, to analyze the variables selected together, and not one at a time, to predict productivity based on the statistical ranking of the variables. The true potential of discriminant analysis is shown in a multigroup situation where the relevant question is one of statistically significant differences among criterion groups considered simultaneously (Bibb & Roncek, 1976).

Data Collection

The required data of work team characteristics were gathered in 1994, utilizing personnel records and company published results for all selected work teams. The data obtained from personnel files for the demographic variables of the selected work team members were kept confidential, and was only used to draw general conclusions based on these variables and their impact on productivity results. To ensure the privacy of records, the selected employees were identified by a random numerical entry in a group composition work sheet. Their names, or other methods of identification, were never recorded.

Table 1. Means, Frequencies, and Percentages of Demographic Characteristics of Selected Teams, and Standard Deviations and *t* test Results for Age, Time on Job, and Years with Company

	Top 10% Teams				Bottom 10% Teams			
Variable	Mean	Freq.	(%)	SD	Mean	Freq.	(%)	SD
Race								
White	.743	651	74%		.435	391	44%	
Black	.149	131	15%		.494	447	49%	
Hispanic	.108	95	11%		.072	65	7%	
Gender								
Men	.769	674	77%		.758	684	76%	
Women	.232	203	23%		.243	219	24%	
Age	41.70	877	100%	9.59[1]	32.33	903	100%	9.49[1]
Years on job	12.67			8.13[2]	5.91			6.38[2]
Years with company	18.90			9.13[3]	10.51			8.40[3]

[1] $t = -20.71$ $df = 1778$ P value = .00
[2] $t = -19.58$ $df = 1778$ P value = .00
[3] $t = -20.19$ $df = 1778$ P value = .00

To arrive at productivity results for the service technicians, the company relies on the service order completion date. This process is automatically entered in the computers when the customer agrees that the service provided meets their expectations. The computer stamps the date and time of the completion and this information cannot be altered in the future. Subsequently, a supervisory program is printed providing the analysis used as the basis for this study. The results published are accurate indicators of performance for each of the teams studied, particularly as they are subject to scrutiny by the public and these regulating government agencies. They are, therefore, considered reliable indicators of productivity.

The data on productivity results were collected for 1991, the year prior to the introduction of the TQM training *(The Quality Advantage)*. The 1991 productivity data were the baseline measures upon which valid determination of the value of the quality training could be made. Productivity data were collected for 1992, the year when TQM training was first introduced to the Service Technicians, and for 1993, after most team members had attended the course.

Analysis of the Data

The data were analyzed to determine the individual and collective impact of the work team characteristics, and training variables on the productivity of the service technicians. As recommended by Norusis (1990) univariate analyses (Alpha = .05) were conducted for all variables except two. The variables 'Race' and 'Gender' are nominal data; consequently, these variables were not subjected to a *t*-test analysis and *t*-test analysis requires interval or ratio data. All variables were included in the final discriminant analysis procedure that will eventually help in determining the significance of their contribution to the impact on productivity results. The analysis of each of the variables will now be presented.

Race The variable 'Race' had been subdivided into three categories and codes, White (1), Black (2), and Hispanic (3). The top ten percent teams had a lower mean score (1.37) indicating that the team composition was somewhat more uniform. In contrast, the higher mean score recorded for the bottom ten percent teams (1.64) indicates that greater employee diversity existed in their team composition. The findings are not significant except to show that the ethnic composition is reflective of the decline in White, non-Hispanic individuals, and the increase in minorities in the American workforce. This can be seen by the increase in these minority groups in the younger, less experienced employees, indicating hiring trends

which are reflective of the population shifts.

Gender There was no significant difference between men and women, coded 1 and 2 respectively. The mean rates for the top ten percent teams and the bottom ten percent teams did not differ significantly (Top mean = 1.23 versus Bottom mean = 1.24). This indicates that men and women do not differ with respect to their performance and productivity results.

Age The question of the impact of age is a vital consideration when exploring productivity improvements. Specifically, Table 1 presents breakdowns of the teams by age and includes means and standard deviations, as well as *t*-test results for this category. As shown, those at the top ten percent were significantly older (Top mean = 41.70). In contrast, the employees at the bottom ten percent were much younger (Bottom mean = 32.33), possibly indicating limited work experience and service with the company. The results of the *t*-test conducted for this variable support this finding (*t* value 20.71 and a significance P of .00). The difference was so great that, in terms of average age, as it relates to years of experience, the employees from the top ten percent teams had an average of almost ten years more that those in the bottom ten percent teams. It is also important to note that while those at the bottom of the scale are much younger, this correlates with the national trend in America as it relates to minorities.

Years Experience as Service Technicians The significant differences in mean scores service technician experience (Top mean = 12.67 years, versus Bottom mean = 5.91 years) suggest that the ability to perform tasks more expeditiously is enhanced by having continually performed these tasks for extended periods of time. The results of the standard deviation for this variable (Top SD = 8.13 versus Bottom SD = 6.38) show the most experienced employees within this category having a substantial greater number of years on the job, particularly when considering the mean for the top teams is 12.67 years of experience on the present job (see Table 1). In contrast, those employees in the bottom ten percent, and who are at the top of the spectrum in this category, do not have an accrued number of years matching even the mean of those employees at the top ten percent. The results of the *t*-test also support this conclusion (*t* value 19.58 and a significance P of .00).

Years of Company Experience As with 'Time on job', the means (Top mean = 18.90 versus Bottom mean = 10.51) shown in table 10 imply that experience gained through service with the company is a strong benefit to improved productivity. Furthermore, the standard deviation scores shown (Top SD = 9.13 versus Bottom SD = 8.40) confirm that the spread in years of experience is consistent with the group norms (see Table 1). That is, the teams from the top ten percent have many more years of service, even for those with the least seniority. In contrast, those at the bottom ten percent have little service with the company, and those with the most seniority within this category do not have significantly more years of service than the norm for this variable by the top ten percent teams. The results of the *t*-test conducted for this variable support the earlier findings (*t* value 20.19 and a significance P of .00).

It should be noted that the mean age of the top ten percent teams (mean = 41.70), as seen in Table 1, is greater than the mean age (mean = 32.33) for the bottom ten percent teams. When analyzed with the variables ' Time on Job', and 'Years with Company' a positive correlation occurs (Time on Job: r = .93, df = 1778; Years with Company: r = .65, df = 1778). In other words, as one variable increases the next one increases proportionately.

Training Attendance Table 2 presents the annual productivity results from 1991, the baseline year when TQM training had not yet been offered to service technicians, 1992 when the training was initiated toward the end of the year, and 1993 when most of the training had been conducted. Both the top ten percent and bottom ten percent teams showed little improvement between the 1991 and 1992 . However, when the 1993 results are considered, the change is noticeable for both groups. The results for the top ten percent teams (1992 mean = 94.90 versus 1993 mean = 98.18) was substantial. Likewise, those teams at the bottom ten percent also recorded an appreciable difference (Bottom 1992 mean = 86.41 versus Bottom 1993 mean = 88.27).

Table 2
Means and Standard Deviations for Productivity Results By Year for Top Ten Percent and Bottom Ten Percent Teams

	Top ten percent teams (n = 67)		Bottom ten percent (n = 66)	
Variable	Mean	*SD*	Mean	*SD*
1991 Results	94.55	3.30	86.59	3.48
1992 Results	94.90	3.36	86.41	3.42
1993 Results	98.18	1.01	88.27	2.89

The standard deviations in Table 2 are particularly meaningful, especially when comparing the 1992 results to the 1993 results. The standard deviation from the top ten percent teams (SD = 1.01) shows that most teams in this category were relatively close together, and at a very high score (mean = 98.17). This indicates that the impact of the total quality management training was positive. These data emphasize the value of the total quality management training per se, regardless of team membership at the top or bottom of the productivity scale.

Training Proximity. Table 3 presents the proximity of training for team members, and the difference in year-end productivity results from 1992 to 1993. The 'Training proximity' mean is relative to the equivalent month and year that the team members attended the training. A numerical value was assigned that corresponded to the month and year of attendance to the program. The coding values selected ranged from one to thirty with one corresponds to the baseline month (January, 1992) when the training program was first offered to Service Technicians, 30 (June, 1994) which is the last month when data were collected. This score of 30 was assigned to all employees whose records indicated that they had not yet attended the total quality management training program. The decision was sound, considering the company's commitment to send all employees to this training program. Most teams reported completing this program by the second quarter of 1994.

Table 3
Means and Standard Deviations on Training Variable 'Training Proximity' by Performance Result Differences from 1992 to 1993[1]

	Training proximity		Change in % points
Groups	Mean[2]	*SD*	Mean[3]
Top ten percent teams	13.13	5.87	3.29
Bottom ten percent teams	17.83	8.39	1.85

[1] The change in percentage points documented from the 1991 to 1992 results was essentially nil and were not included in this table.
[2] Represents the attendance month mean for training proximity
[3] Represents the change in percentage points in productivity from 1992 to 1993 year-end results.

The mean scores (Top mean = 13.13 versus Bottom mean = 17.83) indicate that the team members at the top started to take advantage of the total quality management training program much sooner, once it was offered, than the team members at the bottom. Also, the standard deviation result for the top ten percent teams is smaller (SD = 5.87), with a value closer to zero than that achieved by the bottom ten percent teams (SD = 8.39). These data indicate that the members of the top teams attended the total quality management training at much closer intervals of each other.

These data also indicate that, although there is usually more room for the worst teams to advance in the productivity scale, those at the top ten percent more consistently benefited from the program. In fact, the increase in productivity by the teams in the top ten percent was almost twice as much as the increase

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recorded by those teams in the bottom ten percent category. Thus, proximity of attendance to the total quality management training program, to a noticeable degree, alters the outcome of the training process, especially for the most productive teams.

Relationship to the Research Question

The focus of this study was to determine which variables were responsible for the greatest impact on productivity results. This was determined through the test Canonical Discriminant Function Coefficient. The Canonical Correlation is a measure of the degree of association between the discriminant scores and the groups. It is equivalent to eta from the one-way analysis of variance, that is, the ratio of the between-groups sum of squares to the total sum of squares and thus represents the proportion of the total variance attributable to differences among the groups. (Norusis, M. J., 1990). The cut-off value for the correlation coefficients, denoting the significance of the variables, is considered to be .50. This decision is supported by the fact that the discriminant function is based on prior probability of 0.50, and helps eliminate the need for any discussion of such extraneous variables.

As shown in Table 4, the structure coefficients between the predictor variables and the discriminant function suggest that the primary variables in distinguishing between teams at the top ten percent and teams at the bottom ten percent were, 'Age', 'Years with Company', 'Time on Job', and 'Training Proximity.' In other words, as shown, 'Age' has the highest correlation with the discriminant function (.804). 'Service' and 'Time on job' have the next largest correlations (.788 and .760 respectively), in absolute value. The negative signs are irrelevant as they only indicate that small function values are associated with those particular variables ('Race' and 'Gender'). The standardized coefficient values listed in Table 4 are measures of the magnitude of each variable's contribution to the equation (Weiss, 1976).

Table 4
Pooled-Within-Groups Correlations Between Discriminating Variables and Canonical Discriminant Function

Predictor Variable	Correlation within Function
Age	.804
Service	.788
Time on job	.760
Training	.530
Location	.438
Race	-.348
Gender	-.021

Note. Variables shown by size of correlation within function.

Conclusions

The results of this study identified several important issues, as well as their relationship and impact on productivity. Age was found to be the variable that most successfully differentiated between the teams at the top ten percent in productivity results and the teams at the bottom ten percent in productivity results. It was also determined that this variable, 'Age' had a positive correlation with the variables 'Time on Job', and 'Years with Company.' Additionally, years of experience on the present job, as well as total years of service with the company, appeared to have statistically significant relationships with the high levels of performance recorded by work groups in the top ten percent category. These were older workers and consequently, generally had been on the job longer. This finding, while clearly understandable, was not expected to be such a controlling factor.

Another significant difference was found to be the training variable dealing with scheduling controls.

It appears that the closer the individual team members attend the total quality management training as a team, the greater the results gained by the work group. That is, the teams who attended their training together, or within two months of each other are the teams identified as the most successful teams in terms of productivity achievements. Conversely, the further apart the training scheduling takes place, the less of an impact the training has on the productivity of the work team.

The findings from the discriminant analysis function suggest that team members at the top ten percent in productivity results can be reliably distinguished by a linear combination of the training proximity variable and three demographic team characteristics (`Age', `Time on job', and `Years with Company'). Those employees who comprise the top ten percent teams were much older, had much more time on the present job (service technicians), and much more service with the company, hence more experience to do the job faster and more efficiently. The team members at the top ten percent, however, were not significantly distinct from team members at the bottom ten percent on such factors as race and gender, the other demographic team characteristics analyzed in this study.

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Perspectives of United States Expatriates in the Netherlands, Belgium, and France on Expatriation and the Role of Their Sponsoring Organizations

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In-depth interviews with United States expatriate employees and spouses living in the Netherlands, Belgium, and France reveal their perceptions of expatriate selection and preparation, and the role of the organization in supporting expatriates. Themes that emerged from this interpretive study suggest that expatriates feel unprepared, misunderstood, and forgotten and that organizations, not the expatriates, are primarily responsible for expatriate failures.

Based on employees' managerial and technical expertise, United States organizations decide to send international assignees to foreign destinations. Seldom are other factors such as the candidates' interpersonal skills, communication skills, personalities, or knowledge of the targeted culture questioned although intercultural research has identified communication skills as important to both cross-cultural adaptation and intercultural effectiveness. Hammer (1989) cited communication skills as "one of the three central dimensions viewed as important to an individual's effective functioning in a foreign culture (the other two dimensions are the ability to deal with intercultural stress and the ability to establish interpersonal relationships)" (p. 249), but managers continue to assume that if the employee has managerial or technical expertise, he or she will succeed on an international assignment in a foreign culture.

Problem Statement

Unfortunately for both organizations and expatriates, research studies consistently show that the failure rate among international assignees is high (Copeland, 1985, 1990; McFarland, 1995) and that failure (defined as returning before the assignment is completed) is attributed to inability to adjust to the host culture. Whereas previous research (Copeland, 1985, 1990) indicated that international assignees on short-term assignments (up to six months) do not require preparation for intercultural interactions or cultural adjustment because of the short terms, recent research (McFarland, 1995) indicates that the failure rate is high among short-term as well as long-term international assignees. Regardless of the length of the assignment, ineffective intercultural interactions appear to contribute to the failure of international assignments.

Purpose Statement

Although positivistic research has been used to study intercultural communication training and relocation assistance (McFarland, 1995; Windham International & NFTC, 1994), reports of interpretive research of expatriation are scarce. Little has been systematically studied in terms of expatriates' perceptions of the expatriate experience. The purpose of this study was to learn the perspectives of expatriates and to interpret those perspectives within a theoretical framework in order to understand the meaning of their expatriation experience.

Research Question

This study was designed to learn about expatriation as a *lived* experience from those who are living

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it and to attempt to understand the meaning of the phenomenon of expatriation. Expatriation cannot be separated from intercultural communication, and phenomenology has been labeled a fruitful perspective for the study of intercultural communication (Pilotta cited in Gudykunst & Nishida, 1989). Thus, the research is viewed as a hermeneutic phenomenological study, searching for description (phenomenology) and understanding (hermeneutics) of the phenomenon of expatriation. As such, only one research question was asked: What is it like to be an expatriate?

Literature Review

Due to space limitations, the literature review is severely abbreviated from that of the original study. The literature reveals that organizations are not fully appreciative of the psychological impact of working and living in a culture other than one's own. The psychological impact is evidenced by the astoundingly high failure rate of expatriates (Copeland, 1985; 1990; McFarland, 1995). However, perusal of the literature suggests that high failure rates should not be a surprise if expatriates' psychological well-being and pre-departure cultural preparation are considered.

If predeparture intercultural communication training is provided, it often is inadequate and insufficient. Brislin (1981) believes intercultural training should attempt to improve cognitive, affective, and behavioral performance. However, what organizations offer under the guise of intercultural communication training may provide little more than the do's and don'ts of the target culture. Rarely, does it deliver underlying theories that allow the principles of intercultural communication to be applied to the variety of personalities that are in any culture and to be transferred to other cultures. Even intercultural communication trainers seem to forget that communities and workforces around the world are now multicultural, so to prepare an expatriate to work in Germany, for example, does not negate the probability that he/she will be working with members of other cultures as well. Cultural preparation and adjustment is an issue of human resource development and business outcomes.

Human Resource Development Perspective. Adaptation to a culture becomes synonymous with successful communication within that culture (Gudykunst & Kim, 1992) because culture *is* communication (Hall, 1981). With this in mind, some people may say that if one knows the language, ones knows the culture, but knowing the culture is more than being able to speak the language fluently. Jawaharlal Nehru emphasized that communication is not in the narrow sense of the *word*, but is language of the *mind*, that it is not the appeal to logic and reason, but is an *emotional awareness* of other people (cited in Adler, 1991). Intercultural communication training helps people to be culturally sensitive and aware that, in turn, contributes to cultural adjustment. Expatriates who fail to adjust culturally return to their organizations labeled as failures and suffer professionally as they lose prestige in the eyes of their superiors. These people frequently take positions for which they are over qualified due to their loss of self-confidence and prestige.

Business Perspective. "Culture is not peripheral to business--it's central to business. It permeates every aspect of business" (Guptara, 1990, p. 13). Seventy-five to 83% of corporations report recalls of from 10-14% of their expatriates (Copeland, 1985; McFarland, 1995). Recalls of expatriates cost U.S. corporations over $2 billion per year in terms of funds spent on recalled employees and funds spent to replace them. Nearly half of those who do not adjust well to the culture, but complete their assignments report that they function below their normal level of productivity (Copeland, 1985). In addition, both recalls and low productivity are responsible for inestimable costs in terms of missed business opportunities.

Theoretical Framework

By definition, expatriation is a sojourn in a system other than one's own. Successful expatriation is based on cultural adaptation within that system, which, in turn, is a function of communication. As such, the theoretical framework is built of communication, culture, and general systems theories.

Communication Theory. A basic communication model (cited in Adler, 1991) indicates that the message sent is never the same as the message received. This is true among

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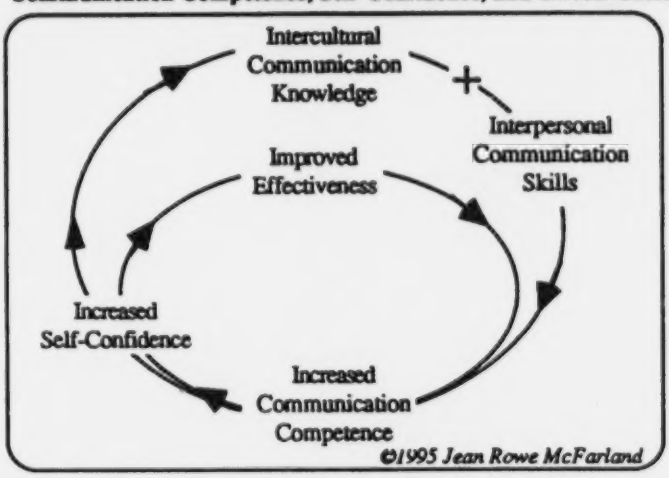
people of the same culture and language and even more evident among people communicating across cultures.

Intercultural Communication. The messages received by listeners/observers are decoded and filtered through their personal perspectives. Those perspectives are determined by their experiences, which are immersed in their cultures, so all interpretations of communications are made through the lens of one's culture. When the cultural lenses are different, interpretations are different; however, when intercultural awareness is heightened, the lenses of the message sender and the message recipient are more nearly aligned, and communication competence is heightened. Intercultural communication competence is based on intercultural communication knowledge synergized with interpersonal communication skill (see Figure 1).

Figure 1. Intercultural Communication Training Combined with Interpersonal Communication Skills Triggers a Cycle of Communication Competence, Self-Confidence, and Effectiveness



Interpersonal Communication. Interpersonal communication skills are a predictor of intercultural effectiveness (Copeland, 1990; Hammer, 1989; Kudirka, 1989; Rohrlich, 1987). The greater the degree of interpersonal interaction and involvement in a host culture, the greater the number of host culture friends and the more positive the expatriate's attitude toward the host culture (Gudykunst & Kim, 1992).

Hofstede's Theory of Cultural Dimensions. Hofstede's (1984, 1991) theory of cultural dimensions assists in characterizing, predicting, identifying, and interpreting general behavior within and among cultures, thus, laying the theoretical foundation for intercultural communication training across cultures and for specific cultures. Hofstede's (1984) four cultural dimensions of (1) individualism versus collectivism, (2) power distance, (3) uncertainty avoidance, and (4) masculinity versus femininity stem from a six-year study in 50 nations.

Individualism versus Collectivism. Individualism pertains to societies in which the ties between individuals are loose: Collectivism, on the opposite pole of this continuum, pertains to societies in which people from birth onward are integrated into strong, cohesive ingroups, which throughout people's lifetimes continue to protect them in exchange for unquestioning loyalty (Hofstede, 1984).

Power Distance. Power distance is the measure of the degree of inequality in society. It is defined as the extent to which the less powerful members of institutions and organizations within a culture expect and accept that power is distributed unequally (Hofstede, 1984, 1991).

Uncertainty Avoidance. The essence of uncertainty is that it is a subjective experience, a feeling that is acquired and learned. Feelings and ways of coping with them belong to cultural heritage, are reflected in collectively held values of members of a society, and lead to collective patterns of behavior in one society (Hofstede, 1984).

Ways to alleviate anxiety, which stems from uncertainty, are through technology, religion, and law: Technology helps to avoid uncertainties caused by nature; religion helps in the acceptance of uncertainties; and laws and rules try to prevent uncertainties in the behavior of other people.

Masculinity versus Femininity. The masculinity index refers to qualities that were historically associated with the male and the female genders. Some of these qualities are assertiveness, competition, and toughness for the male gender and nurturance, cooperation, and relationship-building for the female gender (Hofstede, 1984).

General Systems Theory. General systems theory "[1] provides a perspective and vantage point for thinking about the organization. . . . [2] directs us to consider and influence the processes that are unique to self-aware systems. . . . and [3] helps us to adapt a big-picture view of development" (McLagan, 1989, pp. 78, 79). As globalization becomes more of a reality and less of a prediction, people such as expatriates must function in more distant parts of the system than they once did. Intercultural communication is based on systems theory assumptions and focuses on the intercultural processes that take place when individuals from one culture relocate to another culture (Gudykunst & Kim, 1992).

Research Methodology

This research is an interpretive study of expatriation in western European nations.

Informants. Names of United States expatriates were acquired from top-level international human resource development professionals. The expatriate informants were connected directly as employees or indirectly as spouses to organizations in California, Minnesota, Texas, and Connecticut. All organizations represented are multinational except one, which is a medium-sized international organization. Ages of the informants ranged from the early thirties to the early fifties. All except one informant had expatriate children. Four informants previously had been expatriates; three never had been.. Although unknown until the interviews were completed, none had had intercultural communication training. All had been in their current assignments from 15 months to 3 1/2 years.

Data Collection. As recommended by Spradley (1979), Dobbert (1989), and van Manen (1990), unstructured, audio-taped, face-to-face interviews were used to gather data and to provide detailed, expanded accounts in verbatim records.

Data Analysis. The following strategies for discovering themes by using linguistic symbols have been suggested by Spradley, Tesch, Dobbert, and van Manen (1979, 1987, 1989, 1990, respectively) (sometimes using different terms for the same processes) and were used for thematic analysis in this study: transcription, highlighting, summarization, tree diagramming, domain analysis, taxonomic analysis, and componential analysis.

Findings and Interpretation

Three metathemes emerged during data analysis. They are addressed here as personal, organizational, and cultural factors. The common thread that links the three factors is the organization and its performance in terms of expatriates. Whereas, expatriate failure generally reflects poorly on expatriates, the findings strongly suggest that the organization is primarily responsible for the success or failure of its expatriates through its role in selection (personal factor), support (organizational factor), and preparation (cultural factor) of its expatriates.

Metatheme One: Personal Factor. If an organization plays a competent role in selection of expatriates by including personal attributes and characteristics in the selection criteria, personal factors can be restricted to primarily enablers of cultural adjustment and, thus, successful expatriation.

Expatriates, recognizing the demands of adjusting to foreign cultures, strongly recommend that organizations focus on personal attributes: flexibility, adaptability, enthusiasm, dynamism, employability, self-motivation, resourcefulness, assertiveness, curiosity, initiative, appreciation of cultural diversity, good health, optimum body weight, and positive attitude. Interpersonal skills recommended are a sense of humor, open-mindedness, friendliness, ability to laugh at oneself, honesty, respect for others, and appreciation of personal differences.

Metatheme Two: Organizational Factor. An organization can make itself an enabler of cultural adjustment and, thus, successful expatriation if it employs conscientious human resource management practices in selection (Metatheme 1) and human resource development

practices in the form of psychological and physical support of its expatriates during their expatriation.

There is little doubt that organizations who send expatriates abroad provide satisfactory physical support for them. However, the one need that continually arose in the interviews was their need for psychological support. They need frequent communication with the organization in order to feel remembered and valued. They need confirmation that they are an integral part of the organizational and international system.

Metatheme Three: Cultural Factor. Culture as a disabler of cultural adjustment of expatriates can be minimized or, in some cases, eliminated if intercultural communication training is provided for and utilized by prospective expatriates who are selected for their personal attributes and characteristics (Metatheme 1) in addition to their technical and managerial skills and who are fully supported during expatriation and repatriation by their organizations (Metatheme 2).

Culture is the collective programming of the mind that distinguishes the members of one group or category of people from another (Hofstede, 1993). "As nearly all our mental programs are affected by values, nearly all are affected by culture, and this is reflected by our *behavior*" [emphasis added] (1984, p. 23). If expatriates have been trained in intercultural communication, they will know the behavior to expect; if expatriates know the history of the culture, which should be part of intercultural communication training, they will know the reasons behind the behaviors.

Table one shows that Belgium and France share more commonalities with each other than they do with the Netherlands or the United States; the Netherlands share more commonalities with the United States except in the masculinity dimension. Knowledge of Hofstede's (1984) cultural dimensions and the corresponding index values provides a foundation for predicting behavior of members of these societies. "If I take the train from Brussels to Rotterdam, I can tell the Belgian passengers from the Dutch; most Dutch people greet strangers when entering a small, closed space like a train compartment, but most Belgians do not" (p. 23). Hofstede stated that in his study of 50 countries, "no two countries with a common border and a common language are so far culturally apart . . . as Belgium and the Netherlands" (p. 228). The expatriate informants witnessed similar behaviors:

> You walk six inches from someone, and they will not smile. They will not look at you. It just kind of gets on your nerves after a while.--*Belgium*
>
> The Belgians are much more formal and private. The Dutch are more like Americans--more open, friendly.--*Netherlands*

Table 1. Indices* of Hofstede's Cultural Dimensions for Belgium, France, the Netherlands, and the United States

Dimension	Belgium	France	Netherlands	United States
Power Distance	65	68	38	40
Individualism	75	71	80	91
Masculinity	54	43	14	62
Uncertainty Avoidance	94	86	53	46

*On scales of 1 - 100 where 1 = lowest level and 100 = highest level.

As culture predicts behavior, history predicts culture. Belgium and France fit into a cluster of Latin European countries, all of which reflect their Roman heritage. First, Belgium and France have relatively high Power Distance Index (PDI) values. The Roman Empire was the first large and effective state to be established in the Latin countries (Hofstede, 1984). By an implied contract, the people conferred all power over them to the Roman Emperor, who had absolute

authority and stood above the law (large PDI). When the Roman Empire disintegrated, Germanic invaders of France took over the absolute authority of the Roman emperor, continuing the large PDI. In Hofstede's (1984) view, large power distance values are linked to slow population growth and static societies in which historical cultures tend to persist and little change occurs, as in France and Belgium. Second, a lasting indicator of the cultural inheritance of the Roman Empire is language. Until recently French language and culture have been strongly dominant over the Dutch language and culture in Belgium. French was the language of the Belgian government, upper classes, and education for over 100 years, until emancipation of the Dutch-speaking majority in the 1950s. Third, "The Roman Empire, by establishing an effective system of formal control of its territories and a unified legal system, set an uncertainty avoidance pattern that seems to have survived as a societal norm in the countries most affected by the empire's inheritance" (Hofstede, 1984, p. 135).

Following are observations made by the expatriate informants and the cultural dimensions that could have predicted and explained the observed behaviors had intercultural communication training been delivered to the expatriates.

Uncertainty Avoidance (UA). High uncertainty avoidance levels account for the informants' obeservations of Belgian and French behaviors. People who live in high UA societies typically build high fences around their property, so they cannot be viewed from the street. They have heavy shutters and doors on their homes and offices. They are private people who look at achievement as avoiding failure rather than achieving success. They are likely to view cultural diversity as a threat.

> You can see just by walking through the neighborhood--everybody has a huge fence around their house. They close it off as much as they can, and as soon as it gets dark, those big heavy blinds go down. Very, very private people.--*Belgium*

> Belgians are taken care of in their social system. The women all get 'mommy money' as we call it--you get a certain amount of money for each child you have.--*Belgium*

> A French manager likes to surround himself with people who aren't what you'd call A-1. I think they have the opinion that they're always going to look good in a scenario like that.--*France*

> If you don't want to do [business] within France, they don't want to talk to you. They are nationalistic all the way.--*France*

> There is no interaction between the communities. I can tell you 25% of Antwerp voted for the Nationalist party, which is like the send-them-home party. Anti-American, as well.--*Belgium*

> Have you heard of the laws that they just passed about the language? You may not advertise anything in English.--*France*

> I guess they're not tolerant about other lifestyles.--*Belgium*

Power Distance (PD). Power distance is blatantly demonstrated in bureaucracies and, often, in family structures. Hofstede (1984) observed that the method of family inheritance in France and Belgium contributed to their nationalism and maintained their large power distance. Unlike other European countries where the eldest son inherited the family estate, leaving his siblings to emigrate to nations that had land, such as the United States, the family estates in Belgium and France were divided equally among all the heirs as had been the practice in the Roman Empire. The result, of course, was that throughout the years, each piece of inherited land became smaller, but also, the practice caused people to remain in their homeland, contributing to a static society and retention of bureaucracies and the large power distance established by the Roman Empire. Adler (1991) wrote that a large power distance allows blame and decision-making to always be pushed up the hierarchy to someone else.

> Nobody here makes a mistake. It's always the other guy.--*France*

> The bureaucracy here is a paper mill. They tell you the form you need. Then you need five more forms.--*Belgium*

> Lots of screaming and haggling here. It seems to indicate you have authority or you wouldn't act as such. Authority is needed before you get results.--*Belgium*

> In the U. S., you don't need an identification card.--*Belgium*

Masculinity/Femininity (MAS). "Much of societal masculinity-femininity differences must be historically and traditionally determined . . . [There is a] tendency toward more Catholicism in more uncertainty-avoiding countries, . . [and] the data show that countries with a Catholic culture tend to be more masculine" (Hofstede, 1984, pp. 204, 205). Both Belgium and France are uncertainty-avoiding and predominantly Catholic, and have much higher masculinity values than the Netherlands. In feminine cultures such as the Netherlands, the preference for resolving conflict is by compromise and negotiation. Dutch culture would not include behavioral displays that attract attention as might be found in France and Belgium.

> Belgium has a drinking culture. The bars are open all night. It's not uncommon for men to stay out drinking all night--it's part of the culture. Loud, angry fighting is typical.

> Dad's rule the roost around here. That's just what I see in the neighborhood.--*Belgium*

> John [a neighbor] is as Flemish as his wife is French, and they *demand* that every Sunday the family [married children] be there for lunch, 12:00.--*Belgium*

Individualism/Collectivism (IDV). Most large Power Distance index (PD) countries are low IDV index countries, except some Latin European countries, especially Belgium and France, who have high values in both. According to Hofstede (1984), these people have a need for the strict authority of hierarchical superiors, but at the same time stress their personal independence. "They are dependent individualists" (p. 157). The Dutch, on the other hand, have a higher IDV index than either France or Belgium, but do not experience the tension that adding a large PD index would create. The Netherlands' small PD index and high IDV index more closely link them culturally to the United States than to Belgium or France.

> And the Dutch are more like Americans, really, more open and friendly.--*Netherlands*

> She [neighbor] came over with a plant the first day we moved in, and when I didn't have any books to read, he had a large English selection of books. We still trade books back and forth.--*Netherlands*

> Belgian people don't invite others into their homes--their castles. If I took a casserole, for example, to a Belgian neighbor and said, 'Hi, I'm so-and-so, your neighbor,' they'd look at me like I was some sort of an apparition.--*Belgium*

> I expected within the first week I was here to have someone ring the doorbell and introduce themselves to me. A year went by and I still haven't met those people over there [next door neighbors]--*Belgium*

If the expatriates had had intercultural communication training that included a theoretical foundation for application and transfer of learning, they would have been able to predict and understand many of the behaviors they witnessed.

Conclusion and Future Directions for Research

This study suggests that the large organizations represented herein do not view cultural sensitivity as critically important in conducting global business and do not recognize their role in preventing expatriate failure. The metathemes that emerged from the data analysis imply several avenues for future research in the areas of selection, communication between expatriates and their organizations, cultural preparedness, and definition of expatriate success and failure.

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The Need for an Indigenous Approach to Management Development in Bangladesh

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Two descriptive studies addressed the applicability of Western management theory and practices in Bangladesh. One study explored characteristics perceived by Bangladesh managers to contribute to organizational excellence. The three characteristics factors were finances, quality (very strong), and growth; factors supporting these characteristics were culture, quality practices, and management. The second study explored cultural characteristics in Bangladesh businesses using Hofstede's (1980) survey. Bangladesh is highly collectivistic, highly feminine, with medium-to-high power distance, and medium-to-high uncertainty avoidance.

There has been much debate regarding the applicability of Western management theory and practices to the economic progress of developing countries. Both transnational corporations and non-government organizations often make the ethnocentric assumption that what works in the West is best for management throughout the world.

Management development is dependent on one's image of what management is and how managers should manage. Yet O'Toole (1985, p. 54) correctly observed that "there is no 'right way' to manage all companies at all times." Nevertheless, he identified four general characteristics possessed by all "vanguard" companies: 1) they practice stakeholder symmetry; 2) they are dedicated to a high purpose; 3) they are committed to learning; and 4) they attempt to be the best at everything they do (O'Toole, 1985).

O'Toole's publication followed another best-seller (In Search of Excellence) that presented eight principles for corporate excellence:

1. Have bias for action.
2. Be close to the customer.
3. Encourage autonomy and entrepreneurship.
4. Develop productivity through people.
5. Be hands-on, value driven.
6. Stick to the knitting.
7. Use simple form, lean staff.
8. Display simultaneous loose-tight properties. (Peters & Waterman, 1982)

Deming's (1993) 14 management points and 7 deadly diseases subsequently gained great popularity in the West based on Deming's experience in Japan. Likewise, Juran (1988), Brocka & Brocka (1992), and many, many other experts have all offered their perspectives around what it takes for companies to achieve quality (excellence).

All of these principles and theories have emerged from practices found, and studies conducted, primarily in the United States and, certainly, in developed economies. Historically, management theory and practices in developing countries have been heavily influenced by developed countries--the textbooks used, much of the research conducted, the audio-visual support materials used, and the training of many of their faculty. Yet O'Toole (1985, p. 17) observed that a corporation's needs are defined, at least in part, by "the society of which it is a part." So, too, should the education of managers reflect the society in which they are to operate. That suggests, therefore, that it may not be possible to take a set of principles developed in one cultural setting (the United States) and transfer it wholesale to another cultural setting (Bangladesh).

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Forti (1981) stated:

> Few single approaches could be applied internationally with any hope of success, both because the nature of man's (sic.) basic needs is perceived differently in different countries and because the solutions appropriate to one country would be unsuitable in another with a different sociocultural and ecological setting. (p. 2)

Laurent (1986) conducted a study of participants drawn from managers participating in executive development programs at INSEAD, who were from a wide variety of companies and countries. According to the study, the largest indicator of management assumptions was nationality, which had three times more influence than any other characteristic. Laurent concluded that Management (with a capital M) does not exist and that organizations should not ignore societal and cultural contexts.

This conclusion is consistent with that drawn by Trompenaars (1994):

> Rather than there being one best way of organizing, there are several ways, some very much more culturally appropriate and effective than others, but all of them giving international managers additional options in their repertoires if they are willing and able to clarify the reactions of foreign cultures. (p. 21)

Many developing countries are struggling to develop an indigenous understanding of management for their own cultural environment. In India, for example, Chakraborty wrote several articles (e.g., 1986) and texts (e.g., 1985) underscoring the impact that Yoga and the Vendantic tradition should have on Indian management theory. Sheth (1986) wrote that there are two schools of thought among Indian management scholars:

> (1) those who regard western models...as relevant to all countries, although they recognize the need for minor cultural adaptations, and (2) those who have significant doubts about the applicability of the western concepts and models to the Indian environment and, therefore, are in search of alternative approaches relevant to the socioeconomic and cultural spectrum of contemporary India. Scholars in the second category are likely to be aware of the Indian philosophical and spiritual traditions and believe that these traditions contain models of effective living and working in modern India. (p. 108)

Although not much research is found regarding the importance of indigenized management education materials, many company leaders have learned by experience and attested to the importance of such materials. Wiggenhorn (1990), Motorola corporate vice president of training and education, shared his firm belief that cultural diversity management is an essential element for global competition:

> By studying, evaluating, and implementing the best of the East and the best of the West, we can certainly succeed in the present and look forward to an exciting and rewarding future...It is not just good business sense; it is common sense. (p. 70)

Wiggenhorn was referring to the challenges of managing the many diverse cultures at a global corporation such as Motorola, with over 100,000 employees in more than forty major facilities around the world.

Gourlay (1990), assistant vice-president of Coca Cola Company, stressed the importance of understanding not only the culture of the customer, but also the culture of the workforce: "Understanding how to do business in different countries with different cultures and different languages is fundamental to our success" (p. 72).

Fundamental to successful businesses in countries with different cultures and languages is indigenized management education materials. After The Conference Board's Second Annual Quality Conference in New York City, Conference Board staff member, Schein (1990), wrote:

> The successful management of cultural diversity is essential in achieving world-class quality....[this involves] eradicating cultural stereotypes in parent countries, getting support of local management and dealing with issues of training, empowerment and customer satisfaction in a diversity of peoples and workplaces. (p. xiii)

Likewise, a major World Bank project in Bangladesh, the Business Management Education and Training Project, had among its many objectives the development of indigenous textbooks (5), case studies (about 100), and research (about 50 reports) for use in the country's

management development activities in their universities' faculties of commerce, in the Institute of Business Administration, and in the Bangladesh Management Development Centre. (See McLean, 1986.)

Research Question

The research question, in both studies, related to the question of whether Western management theory and practices can encompass the scope of several cultures and societies. Specifically, one study explored the question of the characteristics perceived by Bangladeshis to contribute to organizational excellence. The second study explored the characteristics of managers in Bangladesh as determined by Hofstede's (1980) classical four categories: Power Distance, Uncertainty Avoidance, Masculinity/Femininity, and Individualism/Collectivism.

Methodology: Characteristics of Excellent Companies

The study on organizational excellence utilized a survey or interview of managers in four urban locations in Bangladesh. An interview schedule/questionnaire was developed, based on literature available in the United States. Several university professors in Bangladesh reviewed the interview schedule/questionnaire for validation, and it was revised based on their input. The instrument was designed to be used as a questionnaire (in English) or an interview schedule (in Bengali), to accommodate the language needs of all respondents.

Test reliability was established by administering the survey (modified slightly to fit the United States environment) to 58 graduate students in Human Resource Development at the University of Minnesota. Stability was determined by administering the same test one week later to the same group of students and correlating the results. The test was revised to improve questions with low stability. The stability of the main factors (questions 1-32) was .91, and the supporting factors (33-70), .92. Both results reflect very high stability. Reliability was also determined using the actual results from the administration of the questionnaire in Bangladesh. Results showed coefficients based on factor analysis of the three main factors of .89, .90, and .82, while they were .90, .84, and .78 for the three supporting factors.

The survey was hand carried to a purposive sample of 68 business people residing in the geographic areas of Chittagong, Dhaka, Khulna, and Rajshahi in Bangladesh. All requested to participate in the study agreed. The respondents were selected so no company contributed more than one respondent. The sample was purposive, representing a range of business types and occupational categories. If the respondent did not have good English skills, the instrument was administered orally in Bengali. Otherwise, the instrument was completed and returned to the research assistant.

The questionnaire instructed the respondents to list the top five companies operating in Bangladesh that they considered to be the best. The purpose of this list was to give respondents something concrete to visualize while answering the survey questions. The questions were grouped into two parts. The first section listed main factors perceived as responsible for company excellence. For example, "The quality of their products/services" and "Their sales volume" are listed as main factors. The second section listed supporting factors to company excellence. Examples of supporting factors to company excellence are: "The companies are committed to continual improvement" and "The companies exercise sound financial controls." The participants were asked to rate the importance of the 70 business factor variables using the following scale: 0--Not at all important; 1--Of some importance; 2--Important; and 3--Very important.

Methodology: Work Related Values

Since publishing his work on international differences in work-related values, Hofstede's (1980, 1991) work has become one of the most often cited pieces of literature on cultures (Sondergaard, 1994). As a foundation for his work, Hofstede (1980) defined culture as the "collective programming of the mind which distinguishes the members of one human group from another" (p. 21). His Value Survey Module (VSM) was administered to 116,000 IBM employees in 40 countries. In this process, he identified four dimensions of culture. Each will be discussed briefly.

Power distance is "the difference between the extent to which [boss] B can determine the behavior of [subordinate] S and the extent to which S can determine the behavior of B" (p. 72). Power distance basically looks at whether there is equality among people. In small power distance countries, Hofstede (1991) suggested that "there is limited dependence of subordinates on bosses, and a preference for consultation, that is interdependence between boss and subordinate....In large power distance countries three is considerable dependence of subordinates on bosses" (p. 27).

Uncertainty avoidance is a measure of how well people tolerate ambiguity. According to Hofstede (1991), people of strong uncertainty avoidance cultures avoid ambiguous situations, while people of weak uncertainty avoidance cultures do not shy away from "activities for which there are no rules" (p. 117).

Individualism "pertains to societies in which the ties between individuals are loose; everyone is expected to look after himself or herself and his or her immediate family," while *collectivism* "pertains to societies in which people from birth onwards are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty" (Hofstede, 1991, p. 51).

Finally, in the most controversial of his factors, Hofstede (1991) concluded that people in *masculine* societies believe that "men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender, and concerned with the quality of life." On the other hand, in *feminine* societies, "both men and women are supposed to be modest, tender, and concerned with the quality of life" (p. 83).

Hofstede's original work (1980) included samples from 40 countries, while an update published in 1991 increased the sample of countries to 50. Bangladesh, however, has not been included in this "world culture map," either through Hofstede's research or that of the many researchers using the VSM.

The VSM was used to collect data from a stratified purposive sample of 258 managers and non-managers in three major Bangladesh cities: Chittagong, Dhaka, and Rajshahi. Table 1, next page, displays the demographics of the sample.

The surveys were hand delivered by the author and Bangladesh business professors during a World Bank commissioned management training program. The VSM consists of 55 questions requiring 45-60 minutes to complete. If the respondents had good English skills (most of the managers), the questionnaire was left to be completed and picked up a week later. If English skills were low (most of the non-managers), the person delivering the survey assisted the respondent by translating the questions into Bengali, the official language of Bangladesh. This approach resulted in a 100% response rate.

The Values Survey Module has in general shown acceptable validity (Hunt, 1981; Singh, 1990; Sondergaard, 1994; Triandis, 1982). Reliability was determined by calculating Cronbach's alphas for the entire instrument and for each of the four scales. While overall reliability was modest but acceptable (.65), the individual scale reliabilities were only marginally acceptable for three of the four scales (Power Distance, .34; Individualism/Collectivism, .49; and Masculinity/Femininity, .58). The reliability for Uncertainty Avoidance was unacceptable at -.03.

Table 1
Demographic Profile of Sample (n=258)

Group	n	%
Age		
29 and under	36	14
30-39	123	48
40 and over	99	38
Education		
10 years and under	37	14
11-15 years	71	28
16 years and over	150	58
Manager Status		
Non-manager	116	45
Manager	142	55
Firm Type		
Multinational	57	22
Privately owned, not multinational	67	26
Owned by government	134	52
Gender		
Male	246	95
Female	12	5

Findings: Characteristics of Excellent Companies

The data were analyzed using factor analysis. The factor analysis, KMO (Kaisser-Meyer-Olkin) index, includes $0 < KMO < 1$. Factor analysis determines the correlation among the questionnaire variables. Anything higher than .5 is good sampling adequacy. The KMO index of variables 1-32 is .57. The KMO index of variables 33-70 is .50.

The clusters of each factor were determined by using the results of a rotated factor analysis. It was determined that there were six categories of variables represented in the survey.

Characteristics The first half of the questionnaire (characteristics) resulted in three clusters: (1) finances, (2) quality, and (3) growth. An example of a finances factor is, "Their level of profitability." Examples of quality and growth factors, respectively, are: "The quality of their products/services" and "Their continuous growth in sales." The top ten main characteristics for company excellence in Bangladesh (first half of the questionnaire) are shown in Table 2, next page.

Supporting Factors It was determined that the second half of the questionnaire (supporting factors) also fit into three factors: (1) culture, (2) quality practices, and (3) management. An example of a culture factor is, "The companies' attempt to be the best at everything they do." A quality practices example is, "The companies' top priority is in producing a high-quality product/service." An example of a management factor is, "The companies' constancy of philosophy." Table 3 displays those items perceived to be the major practices supporting the characteristics of company excellence in Bangladesh.

Table 2
Top Ten Main Characteristics for Company Excellence in Bangladesh (Part A)

Q	Characteristic	Mean	SD
4	Quality of their products/services	2.66	.61
3	Sales volume	2.48	.75
2	Return on investment	2.47	.66
1	Level of profitability	2.41	.74
32	High level of capacity utilization	2.33	.84
5	Concern for consumers	2.30	.81
22	Level of productivity	2.26	.75
9	Concern for their employees in providing good working conditions	2.25	.72
10	Concern for their employees in providing good pay and benefits	2.21	.75
18	Continuous growth in sales	2.20	.73

Note: Q = Question; SD = Standard Deviation

Table 3
Top Ten Supporting Factors for Company Excellence in Bangladesh (Part B)

Q	Characteristic	Mean	SD
1	The companies' top priority is in producing a high-quality product/service	2.72	.62
20	The companies exercise sound financial controls	2.52	.61
3	The companies are committed to continual improvement	2.48	.56
2	The companies attempt to be the best at everything they do	2.46	.72
6	The companies only attempt to do business in fields they understand well	2.34	.69
16	Management of the companies stays in close contact with customer needs	2.31	.80
19	The companies take full advantage of technological improvement	2.30	.76
23	Employee pay in these companies is linked with employee performance	2.17	.76
17	Employee pay and benefits in these companies exceed the average for Bangladesh	2.16	.80
7	The companies attempt to balance the needs of all parties--customers, employees, government, shareholders, dealers, etc.	2.14	.79

Note: Q = Question; SD = Standard Deviation

Findings: Work Related Values

The results showed that Bangladesh is a highly collectivistic (individualism = 7) and highly feminine (masculinity = 9) country of medium-to-high power distance (55) and medium-to-high uncertainty avoidance (55). These characteristics were also compared by age, education level, manager/non-manager, and firm type. Differences among these groups were identified.

Age Collectivism does not vary much with age; the Bangladeshis in the sample remained consistently strong on collectivism across the three age groups. On power distance, those under 30 have a high power distance that diminishes some between the ages of 30-39 and then rebounds some over age 39; it remains from medium to high. While the masculinity score remains the same to age 39, at a relatively low score, the score drops dramatically over age 39. Finally, uncertainty avoidance also remains relatively stable at a medium level through age 39. Over 39, the score rises to a high level, indicating less acceptance of ambiguity at an older age.

Education Level Uncertainty avoidance and power distance decrease from high to medium as years of education received increases. As more education is received, people are more willing to accept ambiguity and equality among people. Educational level, however, does not cause much variation on individualism, though there is a slight movement towards individuation from a very strong position of collectivism. Finally, there is some variation on masculinity, with a very high level of femininity for those with 11-15 years of education, though the other two groups remained low on masculinity.

Managerial/Non-managerial Level The scores on the four cultural dimension varied narrowly with this variable. This finding is consistent with Hofstede's (1980) contention that the four dimensions do not differ by managerial position but, rather, are reflections of the culture broadly.

Firm Type Little variation occurred among the three groups for uncertainty avoidance. Employees of government-owned companies scored the lowest in both individualism (most collectivist) and masculinity (most feminine). On power distance, there were no differences between multinationals and government-owned companies, with employees of privately-owned companies scoring the highest. In fact, not surprisingly, on every one of the four dimensions, though not significantly on uncertainty avoidance, the employees of privately-owned, but not multinational, companies scored higher than the other two groups.

Conclusion

As Swanson (1990) rightly observed, "The global economy does not allow cultural differences to justify poor performances...[nor does it] allow managers to profit as easily from their own below-average performances" (p. 106).

Much more research is needed in this area of cross-cultural management development. Which management philosophies or training methods are most effective, why are they effective, and where are they effective? Which elements of cultural differences ought to be the greatest concern? If Bangladesh and other countries hope to compete in the global market, or even their own market, they will need an indigenous management theory and subsequent practices in order to meet the demands of their business environment.

The research reported herein suggests that Bangladesh managers understand and acknowledge what their organizations must emphasize for their success within the global economy. The results of the Values Survey, however, indicate that the managers in Bangladesh will require management development activities that will be different from those in the United States and other western countries (as identified by Hofstede). Thus, while the goal must be the same, the means of development must be indigenized for the Bangladesh culture (and, presumably, for all unique cultures).

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The future of HRD

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Which organizational and technological and training developments will become crucial in the coming years, and what consequences will they bring to human resource development? These questions lead to study carried out by the faculty of Educational Science and Technology at the University of Twente, in the Netherlands. The ultimate goal of this research was to create an inventory of trends and developments which professionals deem to be influential with regard to the future figure of the HRD field.

One direct catalyst for the research was the report of a similar study in the United States, invloving HRD managers and carried out by the American Society for Training & Development (Training & Development, May 1994, pp. 29-32). Following a brief explanation of the research plan and methods, this article describes findings of the Dutch study, as well as comparisons to results of the American research. It concludes with comments regarding the implications of information which has been obtained through this investigation.

Methodology

In order to optimize the comparison potential of this with the American study, the Dutch researchers made use of an analogous research instrument. Only minor alterations had to be made with regard to the design and methodology. In terms of content, however, the instrument was completely identical to the American version. The Dutch instrument took the form of a written questionnaire which inquired about future developments in the arenas of organization, technology and training. These developments were separated into 40 different types, and for each type, 3 questions were asked: (1) In your opinion, how great is the chance that this development will actually take place?; (2) How great will the effect on HRD be?; (3) How great will the effects of this development impact your organization? The answers were to be given with the use of a 7 point scale: lowerst probability/effect (score 1) and greatest probability/effect (score 7). The Dutch questionnaire was sent to the readers of Training & Development. In total, 161 respondents returned the questionnaire prior to the deadline. Table 1 illustrates some characteristics of the response group.

Two respondents failed to indicate their job function. The distribution of task and job descriptions indicates that over half of the respondents were employed as trainer/consultant (internal and external combined). With regard to fields of employment, the category , "Bank, insurance & business services" stands out: 46% of the respondents (n=73) are employed within this area.

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Table 1: Tasks and job description of the respondents

	Industry, transport, utilities & construction	Bank, insurance & business services	Government	Total
Internal training manager	11	3	8	22
Internal trainer/consultant	13	17	14	44
Personnel staff/line manager	6	3	3	12
Manager external consulting agency	1	19	3	23
Trainer external consulting agency	3	29	12	44
Other	3	2	9	14
Total	37	73	49	159

The question, "how representative is the response group?" is quite difficult to answer. Reliable figures for population characteristics of HRD professionals are severely lacking in the Netherlands. As a result, the representativeness of the response group has been determined via available information, namely Training and Development's subscription list, and membership in the Dutch Association for Training Employees (NVvO). It should be noted that the latter data base has also been used for research into the HRD profile (Van Ginkel, Mulder,& Nijhof, 1994). Both in gender and age, the response group appears to fairly represent the Training & Development reader group, as identified by a telephone survey in 1990 which involved 200 of this magazine's subscribers.

The only exceptions: the percent of respondents from the age group 30-34 is slightly lower than the telephone survey indicates, while from the age group 45-54, relatively more individuals responded. In terms of representation of the NVvO membership, the response group bears a strong resemblance, with a slight over-representation of the 25-34 age group. In addition, 43% of the response group in this research indicate that they are employed in the "Bank, insurance & business services" category, while the NVvO membership roster shows only 34%. The distribution of the respondents with regard to the size of the organization wherein they are employed is in accordance with the distribution of the NVvO members. In summary, the response group is representative of the subscribers to Training & Development, as well as of the professional HRD population in the Netherlands; and the research population does not differ significantly from the national population of HRD professionals.

Organization Developments

17 potential organizational developments were presented to the respondents, with questions as to how likely these developments would occur in the next five years, what will be the effects on HRD and on the organization of the respondent. As previously mentioned, the answers to these questions were given in the form of a number on the 7 point scale. Table 2 illustrates the responses to the organizational development questions. The average score of 5.50 or higher indicates that people feel these developments have a relatively high chance of coming to fruition in the next few years; therefore scores lower than this were excluded from the chart.

Of the 17 organizational developments which were presented, 10 ranked notably high in terms of chance to transpire. The emphasis on the measurement of business results stands out as particularly significant (see table 2, column 1, development 1). The emphasis on business results may also be found (table 2) in nr. 8. This development, however, emphasizes the arrangement of the organization equally as much as business results. Developments 4, 5 and 6 share the indication that employees will be given more responsibility in the work place. This includes not only the execution of their jobs, but also in determination of their career paths. The impact of globalization on organizational development may be found in table 2, developments 2 and 7.

Table 2: Organizational developments with anticipated trends for the coming five years, effect on HRD and organization

	Organizational Developments	Probability	Effect on HRD	Organizational Effects
1	Measuring business results with regard to consumer relevant criteria	6.23	5.96	6.00
2	Communication and information-networking will exceed business and national boundaries	6.13	5.20	5.22
3	Increased importance of the innovative capicity of organizations	6.09	6.11	5.93
4	Increased employee responsible for own work and career path	5.88	5.87	5.25
5	Teams more responsible for total primary process	5.69	5.88	5.56
6	Employees will steer the direction of their own careers more	5.69	5.75	5.00
7	International standards and economy will permanently influence business organization and routine	5.69	5.34	5.03
8	Increased interest in re-engineering organizations with an eye toward high performance	5.67	5.53	5.38
9	Organizations determine their core activities; auxiliary functions are either discontinued or carried out by temporary employees	5.62	5.34	5.14
10	Impatience with the current pace of change will lead to gradual and continuous reengineering of key processes and/or gradual and continuous improvements	5.54	5.32	5.12

With regard to organizational trends, respondents indicated that they expect to see more "trimming down" to nuclear activities (development 9, table 2). Furthermore, the emphasis will continue to be placed on the innovative capicity of organizations (development 3), with the accent on gradual, continuous development (development 10). In addition to the organizational tendencies mentioned in the previous table, this research also examined developments which are expected to have a relatively small chance for survival: large-scale personnel reduction (score 4.75); Interventions causing changes in the primary processes as a result of dissatisfaction with the tempo of the change process (score 4.76); less separation between management and employees in terms of authority, status and roles (score 4.96). Comparison of the less likely developments with the most likely tendencies yields some interesting discoveries. For example, respondents expect more trimming down to only core organizational activities while simultaneously predicting less large-scale personnel reduction. They don't appear to consider that the first of these developments initiaites the second. That is, pulling back to the nuclear functions in an organization implies the discontinuation of auxiliary functions, and thus the lay-off of personnel. It is also noteworthy that substantial organizational changes the primary processes did not appear in table 2. The respondents seem to think that the organizational changes will occur incrementally, not as a result of large-scale, immediate intervention (table 2, development 10). This is a striking contradiction to the currently popular concept of Business Process Engineering, wherein substantial changes are made simply to keep up with the competition. Finally, it is also noteworthy that the professionals expected the current distinction between employee and manager to remain as is, yet at the same time, more accent will be placed on the significance of team building and group accountability for the primary work process.

The effects of the aforementioned organizational developments on HRD may be found in the column, "effect on HRD". If the minimal score of 5.50 remains the criterion for a potential occurrence, only six of the original 17 organizational developments meet this criterion. It is expected that the greatest effect on HRD will be a result of the organizational development, "increased importance of the innovative capicity of organizations," (see table 2, development 3). Also, a stronger trend toward measuring business results with regard to consumer relevant criteria and an "increased interest in re-engineering organizations with an eye toward high performance", (table 2, developments 1 and 8). In addition, other developments expected to have great influence on the role played by HRD include those emphasizing the responsibility of employees for their own

work and career paths, (developments 4,5 and 6). In summary, it may be stated that, while not all of the expected organizational developments will have a large impact, organizational change in terms of optimal business results and stronger appeal for personal responsibility of employees will influence the future of HRD.

The last column of table 2 concerns the anticipated results on the respondent's organization. Of the 17 organizational developments, only 3 appear to have a substantial chance for realization, (again, using the criterion of a minimal 5.50 score). These three developments are: the measurement of business results, the increased importance of innovation in organizations and increased shared responsibility for total primary process. While not the case for all developments, the tendency does appear in table 2, that the respondents rank the possibility of a development occurring higher than its effect on HRD, and the effect on their own organization is even lower than the effect on HRD. This may mean that there is a dwindling chance for certain developments to have significant impact. Thus the respondents mutually agree that the developments will have effects elsewhere (if at all). One explanation for this may be that, from a social standpoint, it is inappropriate to discuss overall chances for developments (which most appear to consider slim). It is far more acceptable to express hesitation with regard to one's own situation.

In table 2 the scores for each category are listed together. This information was also analysed in order to determine whether there was any indirect connection between the respondents judgement of probability for the organizational developments and their judgements regarding effects on HRD and their own organization. The group of respondents was divided into two sub-groups: those employed in a training/consultancy agency, and those working in the personnel or training department of a business. Only development 8 (table 2) showed a significant difference. Respondents employed by a training or consultancy agency estimated the chance for an increased interest in learning organizations with an eye toward the realization of optimal business results to be lower than their colleagues, (employed in personnel or training divisions), did. Finally, any connection between the size of organizations and the reactions of the respondents was considered. For this, only scores from respondents who are employed by businesses were examined, and the 44 respondents working at training and/or consultant agencies were excluded from this stage of analysis. The businesses were categorized: up to 100 employees, 100-500 employees and over 500 employees. The analysis showed no significant pattern in any category of the organizational developments. In other words, it appears that the relative size of a business had no significant impact on the scoring tendencies of the respondents.

Technological Developments

Six developments which refer to the applications of new technologies were presented to the respondents. Of these, five appear to have a good chance of realization, when using the criterion of a minimum 5.50 score (see table 3).

Development 1 clearly stands out as the development with the greatest chance for occurrence in the next five years: "digital electronics such as the internet will change the way information is created, stored, used and shared." Interestingly, a large effect on HRD is not expected, and neither is much impact on the respondent's own organization. It would appear that respondents have been influenced by the current discussions about the electronic superhighway, enough to consider it as having a role in our society, but are less sanguine about its effects on their own personal situation.

Can this be related to ignorance, resistance? Have the respondents had less positive experiences with informational technology developments in the last few years? Was CBT (computer-based training) or CAT (computer-supported training) not the optimal solution for functional shortcomings? Do many businesses still work with mainframes, and if so, are they still waiting (for financial reasons) to replace these with even more portable and flexible systems? It is worth noting at least one technological development which did not meet the 5.50 criterion: "the exchange of computer information will become an important source of learning." The results of this part of the research differ from those of organizational and training developments, when it comes to overall trends. While organizational and training developments evidence a steady decline from

Table 3: Technological developments with anticipated trends for the coming five years, effect on HRD and organization.

Technological developments		Probability	Effect on HRD	Effect on organization
1.	Digital electronics such as the internet will change the way information is created, stored, used and shared	6.11	5.01	5.15
2.	Technology in the workplace will become more portable and user-friendly	5.96	4.48	4.81
3.	The computer will be seen and used less as a main frame, and more as a portable desktop	5.90	4.31	4.57
4.	Organizational growth will spur on further exchange of information with clients and suppliers via the computer	5.81	4.30	4.77
5.	Computers and electronics will play a role in even more work environments	5.57	5.00	4.85

probability to "effect on HRD" and finally lowest at "effect on the organization," the technological developments are seen differently. There is a notable plunge throughout the second category, such that the respondents estimate greater effects on their own organization than on HRD! Again, examination took place of the link between the respondent's source of employment (in personnel or training within a business, or working for training/consultancy agency), and the estimates they made. This time, development 3 from table 3 ("technology in the workplace will become more portable and user-friendly") seems to differ depending on they type of organization. Those employed by businesses estimated the effects on their own organizations to be higher than those working for a training/consultant agency. In addition, any pattern relating the size of the organization to the scoring responses was again examined, (as previously, leaving the employees of training and consultant agencies out of the group). The analysis showed that only development 5 varies along with the size of the business. In small businesses, (with one hundred employees or less), as well as in large businesses, (with over 500 employees), computers and electronics are expected to play a role in even more work environments. As for the other four developments, business size appears to have no influence. In other words, the magnitude of the organization does not seem to be an adequate predictor for measuring the effects of new technologies on the respondents' own businesses.

Training developments

In this category, 17 training developments were presented to the respondents and, again with the criterion of 5.50 as a minimal score, 8 appear to have a reasonable chance for occurrence. These developments are described in table 4. From the information in table 4, it appears that the new models for learning will very likely have the opportunity to play a role in business the next five years. It should also be noted that: "there will be less emphasis on the traditional training concepts, learning will be more integrated with work" (development 1); self-guided learning and team learning are on the rise (development 3); interest is growing in how organizations learn and how they evaluate learning, including how it can be evaluated by temporary employees (development 7). Further, the expectation is that training will be more strongly focused on the performance of employees (developments 2 and 4). The diversification among the work force appears to be an issue which is expected to have significant influence on future developments in training. Finally, another expectation is that organizations will continue to search for the most effective blend of centralized and de-centralized training situations. Three of the developments which, according to the respondents, have little chance of occurring, are especially worth mention.

Two share a common theme, increased governmental support for training; these items are: the government will become more active in business training (score 3.62), the training of specific task

groups will be a conducted under governmental management (3.74), and support for training will shift more from professional trainers to technical specialists (score 4.81). The last of these is particularly remarkable; have we not been discussing the return of the training responsibility to the line manager in the last few years?

Table 4: Training developments with anticipated trends for the coming five years, effect on HRD and organization

	Training developments	Probability	Effect on HRD	Effect on organization
1.	Less emphasis on the traditional training concepts, learning will be more integrated with work	6.10	6.12	5.86
2.	More training will be delivered 'just in time' and directly within the context of a job or task	5.86	5.78	5.52
3.	Increase in self-guided learning and team learning	5.75	5.73	5.47
4.	The emphasis in business high-performance work will shift training content away from isolated skill building and information transfer to performance improvement and support	5.65	5.57	5.29
5.	Monocultural workforces and homoge-neous customer bases are disappearing. Companies will devote more effort to being aware of differences and incorpo-rating diverse values into their practices, products and services	5.62	5.60	5.16
6.	Companies will continue to experiment with centralization and de-centralization, searching for the right mix of overall direction and local delivery of training	5.62	5.49	4.99
7.	Interest will grow in how organizations learn and how they evaluate learning, including how it can be evaluated by temporary employees	5.61	5.47	5.32
8.	Companies with large numbers of temporary and part-time employees are confronted with the problems of how to train, motivate and commu-nicate with these employees	5.55	5.61	4.95

Of the eight developments which appear to have a strong probability for occurring, six have been noted (by the respondents) to have a potentially large effect on HRD (score 5.50 or higher). Just under the limit of 5.50 are the (de)centralization of training and the increased interest in learning how organizations function. Of the tendencies in table 4, the respondents expect only two of them to have a large effect on their own situation: 'less emphasis on traditional training' (development 1), and 'just-in-time' job and task training (development 2). Once again, the researchers looked for any influence of business size, as well as influence related to employment by a business or a training/consultant agency. The trainers who work in a business expect that the diversification issue will play a greater role in the business world in the next five years than their counter-parts who are employed by training/consultant agencies. Business size, again, shows no sign of influencing the respondents' expectations for the probability of the issue, its effect on HRD or its effect on the organization.

Comparison with the US

As a result of using virtually the same research instrument as that developed by the American Society for Training and Development (ASTD), the potential for comparison possibilities has been maximized. In the American research, only HRD managers were asked to participate in the survey, while in the Netherlands, training advisors and personnel staff were also invited to share their opinions regarding future developments (see table 1). The Dutch research shows that the function of the respondent had virtually no influence on his/her perception of the developments. Only in the estimation of the effect on HRD of the measure wherein teams will play a greater role in the

total primary process (see table 2) is there evidence of a slight distinction. Due to the overwhelming statistical support evidencing virtually no difference among respondent groups, the total set of respondents was then compared to the set of American HRD managers. In table 5, information concerning this international comparison is given.

Notably, the respondents' estimated effects on their own organizations are not included in table 5. In this comparison, the focus lies on what field workers find important for the coming years, and how/if this affects HRD. The criterion used for inclusion in this table was: any category with either a Dutch or an American HRD probability and or effect score of at least 5.50 should be included. It should be noted that all of the technological developments would fail to meet this 'strict' criterion. The decision to compare the three top scoring issues for both Dutch and American 'organizational developments' as well as for 'training developments' was made on an arbitrary basis. In examining table 5, one may see that America and Holland have different "top three' lists. In the Netherlands, the most probable items were: (1) "measuring business results with regard to consumer relevant criteria," followed by (2) less emphasis on the traditional training concepts, learning will be more integrated with work and (3) "Increased interest in re-engineering organizations with an eye toward high performance." In the United States, the three highest scoring developments were: (1) "companies will continue to experiment with centralization and de-centralization, searching for the right mix of overall direction and local delivery of training," (2) "Increased interest in re-engineering organizations with an eye toward high performance," (3) "leadership expressed through teams will become more common." This procedure was then applied to the developments' effect on HRD, and that yielded the following results. In the Netherlands, the same three issues scored highest, but in a different sequence: (1) "less emphasis on the traditional training concepts, learning will be more integrated with work," (2) "Increased interest in re-engineering organizations with an eye toward high performance" and (3) "measuring business results with regard to consumer relevant criteria." The scoring behavior of the American HRD managers shows that two of the three issues returned to take place in the "top three" list: (1) "increased interest in re-engineering organizations with an eye toward high performance," secondly -a new addition to the top three list- (2) "increased importance of the innovative capicity of organizations" and (3) "companies will continue to experiment with centralization and de-centralization, searching for the right mix of overall direction and local delivery of training." Clearly the above summary shows that those employed in the Dutch training field are quite strongly in accordance with the American HRD managers. Five of the developments listed in table 5 were considered significant enough to rank at least once in the "top three" key issues. Only one development, "leadership through teams will become more common," was nominated just a single time in the (American) top three. The other 11 developments are less worthy of 'honorable mention,' despite the fact that they have a score of 5.50 or higher!

Afterward

In the research, "the future of HRD," training and personnel staff were asked 40 questions about organizational, technological and training developments. They were given the chance to predict which trends and issues would play key roles in the field of HRD throughout the next few years, if they will affect HRD and if they will affect their individual organizations. The research was carried out in the Netherlands following a similar (almost identical) study in the United States. While it may be argued that the response group comprises a fair image of the Dutch HRD professional population, the researchers realize that the eagerness to participate in this type of study is generally minimal. After repeated requests, the total number of respondents was increased to 161. The relatively low reaction was most likely caused by the fact that this type of research usually yields little or narrowly focused information. On the other hand, it should be mentioned that the interest for this type of information is usually rather wide-spread. Don't we all wish it were so simple to determine whether the company were on the right course, or whether the individual HRD professional were on target. A comprehensive study investigates corporate as well as individual information from a peer group, and certain issues are determined to have national,

Table 5: Comparison of the Netherlands (n=161) with the US (n=90)

	Development	Probability in NL	Probability in US	Effect on HRD NL	Effect on HRD US
Organizational Developments					
1	Measuring business results with regard to consumer relevant criteria	6.23	5.60	5.96	5.60
2	Increased importance of the innovative capicity of organizations	6.09	5.55	6.11	5.95
3	Increased interest in re-engineering organizations with an eye toward high performance	5.61	5.90	5.53	6.10
4	Teams more responsible for total primary process	5.69	5.70	5.88	5.70
5	Increased employee responsibility for own work and career path	5.88	5.50	5.87	5.45
6	Employees will steer the direction of their own careers more	5.69	5.30	5.75	5.15
7	International standards and economy will permanently influence business organization and routine	5.69	5.60	5.34	5.60
8	Employers will have to work harder to earn their employees trust	5.03	5.70	4.99	5.70
9	Leadership expressed through teams will become more common	5.32	5.80	5.44	5.50
Training developments					
10	Less emphasis on the traditional training concepts, learning will be more integrated with work	6.10	5.45	6.12	5.60
11	More training will be deliverd 'just in time' and directly within the context of a job or task	5.86	5.75	5.78	5.75
12	Increase in self-guided learning and team learning	5.75	5.05	5.73	5.65
13	The emphasis on business high-performance work will shift training content away from isolated skill building and information transfer to performance improvement and support	5.65	5.65	5.57	5.80
14	Monocultural workforces and homogeneous customer bases are disappearing. Companies will devote more effort to being aware of differences and incorporating diverse values into their practices, products and services	5.62	5.40	5.60	5.40
15	Companies will continue to experiment with centralization and decentralization, searching for the right mix of overall direction and local delivery of training	5.62	6.20	5.49	5.85
16	Companies with large numbers of temporary and part-time employees are confronted with the problems of how to train, motivate and communicate with these employees	5.55	5.50	5.61	5.60
17	Training delivery will continue to shift from professional trainers to nontrainers such as managers, team leaders and technical specialists	4.81	5.35	5.27	5.60

even international importance and influence. How the information will be used (if at all) will be determined by the organization or HRD professional individually. The aforementioned feedback-function of the information collected through this research is not only valuable in HRD practice, but also to researchers in the field of HRD. For this group, generally somewhat less in touch with

the actualities of HRD (this comment often heard reproachfully), the research, "the future of HRD," may be useful as the input for the formulation of programming suggestions for research in business training. Taking the "top trends" seriously and positively influencing HRD practice would evidence the importance of HRD's alliance with the field of training research. Surely this research has left some readers unsurprised, but for those readers, this may at least confirm their suspicions. For others, this has been new and useful information. Clearly in the Netherlands, as well as in the United States, the battle between creating innovative organizations which produce optimal results continues to rage. Issues including business results, wishes of the clients and the consumers, the increased importance of organizational changing capacity, the integration of learning with working, the search for the most effective mix of (de) central training and leadership through teams and more will continue to fertilize and mould the field of HRD, especially in the immediate future!

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Team Learning: Processes, Interventions and Assessment

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This study explored team learning processes. Specific attention was devoted to the degree of learning facilitator assistance needed for teams to engage in double-loop learning, and the degree to which teams were able to identify their own needs for such assistance. Using a grounded theory approach, the researchers found that only the team with full facilitation reached double-loop learning. Additionally, researchers theorized that learning facilitator framing assumptions regarding optimal conditions for team learning may be a cofactor in the number of missed opportunities for double-loop learning.

The fast changing global marketplace inevitably leads organizational members to settings and situations where the old ways of doing things just don't work anymore. The habits once learned become self-defeating in what appear to be similar contexts but are actually strategically and structurally altered organizational settings. These experiences of dissonance are the ones that actually make change inevitable. When individual organizational members find themselves with tasks and in settings that are not comprehensible given their historically developed models of thought and action, they tend to reflect on practice (Brookfield, 1987, Mezirow, 1991, Schon, 1987). Because concrete practices have evolved in organizational contexts, reflection cannot include only individuals' inquiry into their own practices; it involves analyzing and challenging the institutional structures in which they developed. However, reflection alone is not enough to bring about innovation or possibly even adaptation. In order to do things differently, different organizational practices are needed to provide designs and environments for individuals to plan, implement, and reflect upon their work.

Such fundamental organizational changes require what Argyris and Schon (1978) refer to as double-loop learning. Most organizational change, they contend, can be characterized as the result of single-loop learning in which new actions are generated without changing the unstated, implicit assumptions (variously referred to as governing variables, mental models, paradigms, etc.) that underlie organizational actions. In contrast, double-loop learning requires the surfacing and altering of preexisting assumptions and the taking of fundamentally different forms of action as a result. Double-loop learning is essential for organizational survival amid chaotic, turbulent business conditions: "Single-loop learning is appropriate for the routine, repetitive issues -- it helps get the everyday job done. Double-loop learning is more relevant for the complex, non-programmable issues -- it assures that there will be another day in the future of the organization" (Argyris, 1992, p. 9).

A necessary component for this double-loop learning to occur is the production of new practices. The organizational nature of changing existing practices calls for the transformation to be a collective activity that builds on individual knowledge using dialogue to share mental models and develop action strategies to meet changing organizational needs. The purpose of this exploratory study was to examine the collective learning process of teams under specified conditions preset by the research team. While there is an abundance of research which has provided a number of conceptual models to create optimal conditions for organizational learning, little is known about their effectiveness in terms of practical and concrete strategies to bring about results. Roles of

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interventionists, locus of control of interventions, current assumptions regarding adult learners, and existing conceptualizations of a variety of facilitative objectives (i.e., focus on task or process or both) are important aspects of new collective learning practices that demand elaboration and critique.

Our research team brought multiple perspectives to this project ranging from a strong process consultation orientation to a well developed strategic HRD focus. A shared mental model existed for creating optimal conditions for individual learning, but no real convergence was present for creating optimal conditions for team learning. We agreed that a course must be charted through the organizationally mediated experiences and strategic objectives, and that organizations function in a network of continuous and uncertain information on complex and contradictory happenings. When there is ambiguous information on what is happening in the marketplace, organizations must act in the presence of risk without clear notions of the consequences of their actions. Experimentation as a cherished and rewarded organizational practice provided the common ground for understanding the collective team learning design adapted for this study.

Research Questions

This exploratory study is designed to provide preliminary answers and to guide further inquiry regarding four primary questions:

1. To what degree is external assistance from a learning facilitator needed for teams to engage in double-loop learning?
2. To what degree are teams able to identify their own needs for assistance from a learning facilitator?
3. What factors influence decisions by the learning facilitator to intervene or not intervene to promote double-loop learning?
4. What are the major types of interventions employed by learning facilitators in contrast to those used by process consultants?

Methodology

This study explored the organizational learning processes of three teams formed in conjunction with a graduate-level university course. Each team followed a modified action learning process (Revans, 1982; Pedler, 1992) that spanned a 12-week period. One student in each team served as the host, providing an issue or problem from his or her own organization to serve as a focus for the action learning process. Each team completed multiple iterations of the learning cycle in which it planned actions, implemented the actions, reflected on the actions, and developed new plans based on what it had learned (Redding and Catalanello, 1994). According to this model, the learning cycle forms the primary unit of analysis when assessing organizational learning processes. Each cycle can be assessed across three dimensions: speed (average length of time required to complete a cycle), depth (degree of double-loop learning that occurs during each cycle), and breadth (degree to which learning is transferred to other parts of the organization or other strategic challenges) (Redding, 1996). Audiotape recordings and observer notations were made of each team meeting. In addition, each team member maintained a learning log describing his or her perceptions of the process.

Each team was provided the opportunity of using a learning facilitator. Teams were instructed regarding the role of a learning facilitator and how the learning facilitator might support the team in its learning process. They were informed that learning facilitators would not act as process consultants but would limit interventions to actions that would enhance the degree of learning that occurred in each team. The teams contracted with their learning facilitator in three different ways. Team # 1 decided not to use a learning facilitator. Team #2 decided to invite the learning facilitator to step in whenever he or she deemed necessary. Team #3 decided it would specifically ask the learning facilitator to step in when it felt the team needed help. Otherwise, the learning facilitator should not intervene. Teams were asked at the end of each iteration of a learning cycle whether they

wanted to change their contracts with their learning facilitators. None of the three teams changed its original decision.

At the end of the course, the research team reviewed individual learning logs, audiotape recordings, and observer notes. For each iteration, the research team rated the degree of learning that occurred, using the operational definitions and coding instructions outlined in Exhibit 1.

Exhibit 1. Operational Definitions and Coding Instructions

Operational Definitions

Learning Cycle	A three-phase process through which a team plans (P) a course of action, implements (I) a course of action, and reflects (R) regarding the degree to which the action achieved desired outcomes.
Course of Action	A collectively agreed-upon series of steps to achieve an intended outcome.
Intended Outcome	A desired result collectively agreed upon by a team.
Actual Outcome	The result that occurred from the team's course of action.
Framing Assumptions	A set of existing conditions, either explicit or implicit, which are necessary to make a given course of action valid.
Iteration	One complete learning cycle. The first iteration is labeled as P^1, I^1, and R^1. The second iteration is labeled P^2, I^2, and R^2, ...

Coding Instructions

Step 1: Identify each iteration of the learning cycle.
Step 2: Assign one or more of the following codes to each iteration:

A	***No Perceived Error*** -- P^n and P^{n+1} are the same. No team member, either in logs or meetings, expressed a perception that intended outcomes and actual outcomes did not match.
B	***Single-loop Learning*** -- P^n and P^{n+1} are different. Framing assumptions underlying P^n and P^{n+1} are the same.
C	***Double-loop Learning*** -- P^n and P^{n+1} are different. Framing assumptions underlying P^n and P^{n+1} are different.
D	***Missed Opportunity for Single-Loop Learning*** -- P^n and P^{n+1} are the same. One or more members expressed in logs or meetings perceptions that actual outcomes did not match intended outcomes.
E	***Missed Opportunity for Double-Loop Learning*** -- P^n and P^{n+1} are different. Framing assumptions are the same. One or more members questioned the validity of framing assumptions in logs or meetings.

Results and Conclusions

1. After reviewing logs, audiotapes, and observer notes, the research team identified the learning cycle iterations completed by each team. Team #1 and Team #2 completed three full iterations of the learning cycle and the planning phase for a fourth iteration. Team #3 completed two full iterations and completed the planning phase for a third. As a result, eight iterations of the learning cycle were available to the research team for rating.

2. Using the operational definitions and coding instructions described in Exhibit 1, the research team reached consensus ratings for each of the eight iterations as displayed in Table 2.

Table 1. Research Team Ratings of Learning Cycles

Learning Cycles	Team #1	Team #2	Team #3
Iteration #1	Missed opportunity for double-loop learning	Missed opportunity for double-loop learning	Missed opportunity for double-loop learning
Iteration #2	Single-loop learning; Missed opportunity for double-loop learning	Double-loop learning	Missed opportunity for double-loop learning
Iteration #3	Missed opportunity for double-loop learning	No perceived error	

According to the ratings by the research team, there were six missed opportunities for double-loop learning. Only one iteration was rated as producing double-loop learning. The incident of double-loop learning occurred immediately after an intervention by the learning facilitator. This finding supports the rarity of double-loop learning often cited in the literature (Argyris, 1992). It also indicates that active learning facilitation may be an important factor determining the degree to which double-loop learning occurs or not.

3. There were seven situations where interventions by learning facilitators may have helped teams to engage in double-loop learning. (These situations include the six missed opportunities for double-loop learning and the single incident of double-loop learning). In only one of the seven cases did the team ask for assistance from a learning facilitator. Even when team members expressed high levels of frustration and even when teams openly recognized that they were missing opportunities for double-loop learning, teams appeared to avoid asking for outside help. Such responses may be the result of defensive routines adopted to avoid "discussing the undiscussables" (Argyris, 1992, p. 40). These results suggest that if an organization wishes to enhance the likelihood of double-loop learning, it may need to mandate the use of learning facilitators, even when (or possibly especially when) resistance is being manifested by teams.

4. After the team learning process concluded, the missed opportunities for double-loop learning for all three teams were described to the three learning facilitators. Through this process, the learning facilitators were able to speculate how they might have responded to situations that occurred in the other teams. The three facilitators were asked whether, having had the opportunity, they would have intervened or not in each of the situations. In most cases, the facilitators indicated that they would not have intervened, even knowing that the incident represented a missed opportunity for double-loop learning. Several reasons were cited by learning facilitators for their decisions not to intervene. These included:

- Learning needs to be self-directed and voluntary. People need to have control over their own learning.
- Interventions must occur at "teachable moments" when people are ready to learn.
- Only the minimal amount of help needed should be provided. When you are not sure whether to intervene or not, don't.
- Teams should be given time to work things out on their own.
- Teams proceed through stages of development. Their readiness for interventions is determined by their stage of development.
- A climate of trust and cohesion is a necessary prerequisite for successful interventions.

These reasons reflect many prevailing themes in the human resource development and organization development literature regarding optimal conditions for learning and change. However, such rationale may limit the ability of learning facilitators to maximize double-loop learning. Given the necessity of double-loop learning for competitive success and organizational viability, it is important that these shared mindsets be openly questioned and explored in terms of their validity amid current realities. In other words, as HRD and OD professionals, it seems essential that we engage in our own double-loop learning regarding how we can best facilitate double-loop learning of the individuals, teams, and organizations we serve.

5. The missed opportunities for double-loop learning appeared to fall in several categories. Using a grounded theory approach, researchers categorized the missed opportunities into the three categories described in Table 2.

Table 2. Categorization of Missed Opportunities for Double Loop Learning

Category A: Team members possessed concerns about the direction of team activities that they never voiced to the team.

Category B: Team members expressed concerns about the direction of team activities, but these perceptions were not integrated into new understandings of the situation by the team.

Category C: Team members expressed concerns about the direction of team activities, and these concerns were integrated into a new understanding of the situation by the team. However, no new action were taken that reflected the new understanding.

In the effort to develop a best practices mode, these categories have been used to develop a framework for team learning interventions to increase the speed, depth, and breadth of team learning (Redding, *The Team Learning Consultant*, 1996).

Implications for Research and Practice

The study reported here isolated team learning as a component of organizational learning for the purposes of understanding it, intervening to improve it, and assessing its effectiveness. While team learning objectives and outcomes should be considered within a strategic organizational context, teams offer accessible research sites for increasing our understanding of how organizations adapt and compete in highly turbulent environments.

The learning cycle at the team level provided the primary unit of analysis for this research and the dimensions of speed, depth and breadth of learning were examined using a grounded theory approach. The results yielded particularly rich information regarding the depth of learning at the team level. Subsequent research designs will explore targeted assessment methodologies for the speed and breadth dimensions.

From a practical standpoint, this study may lead to a new definition of the change agent role, that of the learning facilitator. Recent contributions to the organization development literature indicate increasing dissatisfaction with the capacity of either the process consultant or, in more general terms, organization development interventions to substantially accelerate or deepen organizational responses to ill structured problems and uncertainly. The current study led to a work-in-progress that is investigating how the continuous assessment of the speed, depth and breadth dimensions of the learning cycle assists in the diagnosis of intervention opportunities and appropriate utilization of those interventions to maximize team learning.

Preliminary findings suggest that both the role of the interventionist and the desired types of interventions differ from traditional process consultation approaches when the focus is clearly on learning as opposed to group process or interpersonal dynamics. More research utilizing increasingly rigorous research designs is called for to further define and articulate the role of a team learning consultant as distinct from a process consultant.

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The Chief Learning Officer: A Case Study at Millbrook Distribution Services

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In a handful of American corporations seeking to become learning organizations, a rising trend is visible. This is the conversion of "corporate training " into a more powerful, more broadly defined set of responsibilities appropriate to the newly adopted title of Chief Learning Officer (CLO). This case reports the experience of one CLO, describing how and why his position changed, and why the title CLO signals a change in corporate thinking about human resource development.

Over several decades, theorists and practitioners of human resource development have debated issues surrounding the perceived power or powerlessness of HRD to enhance the organizations they serve. Debates continue over whether HRD is or is not a profession, and what kind of preparation practitioners need to be effective (or at least perceived to be effective, which is not quite the same thing). Although training is increasingly viewed by corporate leaders as a means to gain competitive advantage in a new world economy, no solid consensus has emerged about who should be in charge of training, how they should be prepared, what they should be doing, and why.

In general, corporations and other organizations do not know why HRD and training are not identical, and they seem not to know that having responsibility for learning processes in an organization requires an in-depth knowledge base that goes beyond " business knowledge," "public knowledge, " or "company knowledge." Under pressure not only to survive but thrive, executives may wonder why they should get to know HRD any better, particularly when there are still loud voices telling them that an MBA with a few training courses may be a better bet as an HRD leader than someone who has a master's degree in HRD (Kaeter, 1995). Fortunately, visionary leaders have always listened to their own voices and chosen to create new ways of doing things. The story of HRD at Millbrook Distribution Services, a McKesson Corporation subsidiary, is reported in the second half of this discussion. It appears to be a case in point.

Theoretical and Experiential Bases for This Study

Theoretical discussions about the nature, power, and positioning of HRD in organizations have taken many forms. For example, Hansen & Kahnweiler (1995) have approached these issues from the cultural perspective, analyzing "occupational scripts" that suggest that HRD is a subculture in organizations. They suspect that communication breakdowns occur because HRD occupational scripts do not match those of the dominant culture in which they are voiced. Pepitone (1995), a management consultant, finds communication breakdowns to be rooted in mutual misunderstandings about what management needs and about what HRD has to offer, but he also finds that trainers themselves narrowly conceive their misson and may sometimes be unduly "arrogant" (p. 10). Communication across disciplines is thus named by these writers as ultimately the central issue.

Earlier, Watkins (1989, 1991) used conceptual modeling strategies to show the divergent theory bases and variety of perceptions people have about HRD, depending on the enculturating disciplines from which they come and on the alternative metaphors they use to describe what human resource development is and does. This is indicative of paradigm differences, so that whatever "scenic overlook" one uses, HRD becomes whatever one sees. Quite bluntly, this means that HRD can be, and is individually defined on the basis of personal experience and personally held "world views" (Kuhn,

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1970). This creates enormous "translation" problems for the field. The "fifth discipline" Senge promotes --that is, system thinking that builds composite scenes from all the overlooks -- may help HRD to get past these definitional and paradigm traps (Senge, 1990).

A Logic for a Strong, Unified, and Self-Contained HRD Function

Watkins and Willis (1991) noted that tensions exist within HRD because practitioners continue to have difficulty seeing themselves 1) as part of a unified field , or 2) as having a deep-seated systemic role in organizations that actually has little to do with traditional classroom activity. On the basis of corporate experience and with the use of a systems conceptual analysis, Willis proposed that some of the tensions are rooted not only in loose or personalized definitions, but also in differential organizational power relationships. Tensions are generated by conventional views of HRD as filtered through the mind sets and expectations corporations have whenever "human resources" is mentioned. The results are that HRD tends to be defined *in relation to*, and even *by what it is not*. Because of the strength of this association, it is defined as a subordinate function, with much less power than it needs to be credible and to make an organizational difference. Willis has questioned whether human resource development can ever reach its full potential to help solve organization-level problems unless it is surgically separated from human resource management (Watkins & Willis, p. 98).

The researchers agree that the same logic that historically separated the information systems function from the finance department may apply to the separation of human resource development from the HR or personnel department. Issues of competitive edge, corporate social responsibility and public image, huge shakeups in staffing, changing work mores, overrun learning curves, and rapid market response needs may all be leading thoughtful executives toward taking a second look at what HRD would seem to be uniquely able to provide. HRD by holistic definition and design maneuvers among multiple systems, subsystems, and environments, synthesizing what is learned, discovering what needs to be learned, and shaping the way it is learned to create best advantage for the individuals and organizations served. The analogy between information systems and organizational learning systems differs primarily in the respect that the purpose of organizational information systems is to encode and carry data, and the purpose of organizational learning systems is to encode and carry knowledge, with intellectual rules for using it.

Making HRD universally a separate function in organizations does not in itself insure viability and added value. It can, however, be a crucial first step toward reinventing HRD as a systemic part of contemporary organizations. It needs to be conceived as something more than an auxiliary pump called in to help bail out the organization when other pumps fail; it needs to be an integral and permanent resource to the organization. No one suggests that organizations can eliminate information systems in hard times, and what is suggested is that HRD is of similar organizational value.

Kimmerling (1993), notes the promotion among practitioners of the idea of a "chief training officer" (CTO) but also reports that there are only a few of these who have actually become part of an executive team. Even though Kimmerling cites the Willis article in the *Human Resource Development Quarterly* (1991) and underlines the value of developing HRD leaders, he does not make a distinction between CTO and CLO title designations. The researchers believe that this is an important distinction. The terms "training" and "learning" convey a different sense of agency, with very different images and messages, as well as very different histories and expectations. For those who believe that metaphors and precision in wording help to create organizational realities, the idea of a CTO and the idea of a CLO are not perfectly interchangeable, and the growing of a learning culture may hang in the balance.

In the cited article, Willis took the promises of organizations that "our employees are our most important assets" seriously, chose a systems point of view and proposed the need for a Chief Learning Officer to act as "'leading part' in the creation of systemic learning cultures" (1991, pp. 181-187). Research has not revealed the extent to which that advice has been acted upon by organizations over the past five years, but it is known that the key informant and co-author of this study, Gary May , is one of a growing number of HRD leaders who have the CLO title. In naming Judith Rosenblum as Coca Cola KO Company's first Chief Learning Officer, its President and Chief Operating Officer Doug Ivester said, "This step isn't about training; it is about developing our intellectual capital, coupled with technology and new ways of learning, to create the future" (*KO This Week*, September 22, 1995, p. 3). These are

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certainly vanguard appointments and it remains to be seen whether this is really a trend and whether it will continue.

Studying what happens in companies that take this step can be an important research agenda for the future, if for no other reason than the fact that CLO's are a new organizational phenomenon. Researchers are well aware that in some organizations, HRD leaders have previously risen in influence and reporting relationships on the strength of their own competence, ability to build relationships, and organizational value. But this does not mean that such well-known figures have institutionizalized this happy result for others to follow, as creating the position of CLO may do.

Method of Inquiry

Since the theoretical framework is, broadly, the changing nature of HRD, and specifically, leadership in HRD, it was advantageous to use conceptual model building as a research strategy. Modified case study is the methodology. A single case is reported. The researchers are aware that it does not conform to all of the criteria for case study research, but it is a beginning. It has the advantage of bypassing the issues of whether HRD is an aspect of HR, or whether it is obligated to collaborate with HRM (human resource management) any more or any less than it does with every other subgroup in the organization, for the simple reason that the CLO has been consciously made part of the executive group. Power equity issues are instantly ameliorated as well. The unlikelihood that large scale learning organizations can be created without the leadership of a qualified CLO, or someone having CLO qualifications regardless of title, is one of the most important assumptions in this study.

May has created a history of his "CLO life" over the months since his appointment, concentrating on what brought his organization to that decision, on how his position is evolving, and how cultural transformation and learning initiatives are proceeding. Because May is not yet able to draw on either qualitative or quantitative comparisons of his experience with the experiences of other CLO's, the researchers acknowledge subjectivity in the report. Such bias is inherent in self-report but has been minimized as much as possible by adding written documentation. While use of an outside interviewer might have added dimensions that May did not consider, both researchers were interested primarily and simply in recording the observations and conclusions of a bona fide CLO after two years of thinking and acting in that role. This is, in both a formal and informal sense, a story-telling and a search for patterns that may be of significance for other organizations.

Research Questions

As a basis for conceptual modeling, the research questions are deliberately exploratory and systemic, concerned with variables unfamiliar and contextual in nature. The researchers are looking for patterns and pattern implications that can guide future research. Some initiating questions are:

1) How should an HRD executive, at the same organizational level as a Chief Financial Officer (CFO) and Chief Operating Officer (COO) be expected to envision, plan, and operate in successful organizations?

2) What does it mean currently to be a CLO?

How does an HRD person first present the idea of CLO appointment to executive management? How are perceptions of HRD changed, if at all, when a CLO appointment is made? Are futurist visions and organizational change opportunities enhanced by this title change and what it implies? To what extent is the position of CLO viewed as an equivalent or counterpart to the CFO (Chief Financial Officer)? Are there indications that this title change is a real recognition that "intellectual capital," like financial capital and assets, needs executive level attention? What salient qualifications seem to allow a potential CLO to achieve that title?

The degree to which these questions have been answered in the case of one organization, from the CLO's own point of view are left largely to the reader's own decision. The researchers' goals are served by establishing the conditions for further dialogue. The case study begins in the next section by explaining the forces that led to creation of the CLO position at Millbrook Distribution Services.

The Millbrook Context: Forces of Change

Millbrook Distribution Services, a subsidiary of McKesson Corporation, is one of the nation's largest value-added distributors of health and beauty care, general merchandise, and specialty foods. With annual revenues exceeding $600 million, the company serves over 15,000 retailers, primarily supermarkets, across 42 states. Millbrook employs 2,700 people, including a national sales force, and has four distribution centers located in Leicester, MA, Harrison, AR, Ozark, AL, and Greenville, NC.

Millbrook was formed in January of 1994 by the merger of two separate McKesson companies which had been acquired in the mid 1980's. The merger was a response to dramatic changes taking place in the supermarket industry. Conventional supermarket operators were losing sales to "super retailers" such as Wal Mart, whose logistical innovations had led to increased efficiencies and lower prices. As the supermarket industry fought back with efforts to drive costs out of the supply chain, intense pressure was place on suppliers to lower costs by reengineering distribution and in-store services. Traditional service wholesalers, who had made their mark in a low-technology era through labor intensive services, were in trouble.

Robert Sigel, an industry veteran with a proven track record of innovation for McKesson, was appointed president and CEO of the newly formed company and given a mandate to enact sweeping changes to align Millbrook with the new business environment. Sigel, in turn, recruited a new senior management team to help redefine and restructure the business. This included the appointment of a Chief Learning Officer, to report directly to the president and serve on the Executive Committee. Sigel's announcement explained the rationale: "The appointment of Gary May as Chief Learning Officer, reporting directly to me, should send a clear signal that continuous learning is of strategic importance. We are in the process of changing into a very different company in order to respond to new realities in the marketplace. I'm counting on Gary to draw on his business background, academic training, and communication skills to help us manage through the non-stop change and transition."

May brought unique, double-barreled credentials to the new position. With a degree in business administration from Duke University, he had spent 17 years as a second-generation business owner before selling the family distribution business to McKesson in 1985. He used the change as an opportunity to focus on his long time interest in the field of training and returned to school to complete a masters degree in Human Resource Development at Georgia State University while working for McKesson as a training director. He is currently finishing doctoral work in HRD at Georgia State. May and Sigel had known each other through trade association work when they both owned family businesses and through their mutual association with McKesson. The Chief Learning Officer idea grew out of their discussions of systems theory and changing HRD paradigms based of the work of Dr. Verna Willis at Georgia State University.

The Job of a Chief Learning Officer

The concept of Chief Learning Officer is work in progress at Millbrook and goes far beyond traditional concepts of training and development. The position is graded at senior vice president level, and works in "systemic interdependence" (Marsick & Watkins,1994) with the senior leadership of the other strategic parts of the organization: Sales, Purchasing, Finance, Information Systems, Logistics, Human Resources, and Business Process Improvement.

Mission. The primary mission of the position is threefold: (1) to facilitate learning and change, (2) to improve individual, team, and organizational effectiveness through the integrated use of communication media, performance consulting, training, and organizational design, and (3) to support business strategy and tactics.

Roles. The position is designed first to serve as a *strategic resource*, representing the HRD perspective in the strategic planning process at senior executive level and insuring that HRD efforts are linked to the organization's strategic goals. Secondly, the position represents an *expert resource*, providing "best practices" knowledge and serving as an entry point for external consulting expertise. Finally, the position serves as *process owner* of three processes deemed critical to organizational learning: (1) managing internal and external communications, including publications, advertising, and public relations, (2) managing needs analysis, design, testing, delivery, and evaluation of performance improvement and training interventions, and (3) initiating and managing partnerships with line managers and learners to insure transfer and maintenance of learning in the workplace.

Management of the formal communication processes of the organization as part of the Chief Learning Officer's responsibilities is believed to be a leading edge innovation. Based on the writings of Diane Gayeski (1993), the assignment recognizes the importance of managing communication processes in an information age. In times of non-stop change, it is essential to bridge the traditional "islands of corporate communication" such as training and development, employee communications, public affairs, corporate media, documentation, library systems, policies and procedures, and advertising and marketing to create integrated, consistent, and coherent messages to stakeholders. As the old saying goes, to create a permanent revolution requires control of three systems: education, communication, and banking. The Chief Learning Officer at Millbrook has responsibility for two of the three.

Organization. The Chief Learning Officer's staff has been kept deliberately small, building on Marsick and Watkin's (1993) concept that learning processes must be embedded in the line organization and individuals must take ownership for their own development and learning on a self-directed basis. The group consists of four functions and six positions: (1) a Learning Coordinator, responsible for the production of materials, coordination of schedules, and the maintenance of the self-directed learning centers, (2) a Communication Coordinator and a Graphic Design specialist responsible for the communication efforts, (3) a Learning Technologist, responsible for CBT and video production, and (4) two Learning Facilitators responsible for the research, design, delivery, and evaluation of learning interventions and the training of trainers. Outsourcing provides speed, flexibility, and access to additional expertise as required.

Cultural Transformation: Example Interventions

The first two years in the new position of CLO were devoted almost exclusively to assisting with the development and communication of a new vision and strategy for the organization and tending to the cultural transformation required to support the new corporate direction. The change was complicated by the geographic diversity of the distribution centers and the distinct cultural differences of the two merged firms, one based in New England and one in the Midwest. The literature provides ample evidence of the difficulty of cultural change (e.g. Trice & Beyer, 1993; Tichy & Sherman, 1994). As Marsick and Watkins (1994) have noted: "Training programs can help deliver skills needed for organizations to change, but do not address the deep-seated mental models and attitudes or the organizational structures and norms which perpetuate them (p. 114)." Three example interventions illustrate the role of the Chief Learning Officer in the cultural transformation process.

Working in tandem with the CEO and the Executive Committee, the CLO led the design of graphic images and metaphors to help communicate the new marketplace vision for Millbrook and the new mental models and behaviors required for success. With the involvement of line employees, four images were constructed (The Millbrook Team Mission, Core Values, Ten Commitments, and Cycle of Success) and incorporated on a continuing basis into the corporate decor, communications, training programs, and team meetings. However, these formal statements of organizational philosophy have little power to change behavior without the concurrent reinforcement of what Schein (1991) calls "mechanisms for embedding and transmitting culture (p. 224)." In popular terms, it's called "walking the talk." Here, the CLO's contribution was to work collectively and individually with the members of the Executive Committee and department managers on understanding and operationalizing Schein's ten mechanisms (see Figure 1).

Figure 1. Mechanisms for Embedding and Transmitting Culture (Schein, 1991)

Primary	Secondary
1. What leaders pay attention to, measure, and control	1. The organization's design and structure
2. Leader reactions to critical incidents and organizational crises	2. Organizational systems and procedures
3. Deliberate role modeling, teaching, and coaching by leaders	3. Design of physical space, facades, and buildings
4. Criteria for allocation of rewards and status	4. Stories, legends, myths, and parables about important events and people
5. Criteria for recruitment, selection, promotion, and excommunication	5. Formal statements of organizational philosophy, creeds, and charters

Another key intervention led by the CLO was the development of a "warp speed restructure protocol" designed to examine functional norms, take layers out of the organizational structure, reduce costs, improve communications, and set the stage for process reengineering and continuous improvement initiatives. This initiative drew heavily on Weisbord's (1987) socio-technical theories such as the future search conference and a variety of OD process tools to effect rapid changes in a department's structure while involving all the players in an open and candid way.

A third example of how the CLO has helped support culture transformation is the development with McKesson OD staff of a proprietary workshop series called "Trekking the In-Betweens" based on a change model developed by William Bridges (1991). The workshops were delivered by senior line managers and helped equip employees with ways to deal constructively with the confusion, uncertainty, and ambiguity of non-stop change.

Learning Initiatives: Example Projects

The cultural transformation effort is considered a never-ending process, but as the interventions have taken root, attention has turned to learning initiatives designed to support the marketplace strategy and address deficiencies in skills essential to maintaining the new culture. This includes the construction of a "comprehensive learning plan" designed to replace the traditional classroom paradigm with more individual assessment and self-directed /action learning initiatives supported by the performance management system. This on-going, systemic learning process is then supplemented by specific learning projects linked to strategic issues.

For example, during a strategic planning retreat facilitated with the senior executives, it was agreed that the organization as a whole lacked critical thinking and problem solving skills. This deficiency, which was perpetuating inefficiencies and contributing to higher costs, was selected as the key learning intervention for the fiscal year and integrated with all the other cost improvement projects targeted by the Executive Committee.

Another strategic issue is revenue growth in the face of an intense, competitive marketplace. Here the CLO was involved with an external marketing firm, the Executive Committee, senior sales management, and his communications staff in the formulation of a new marketing strategy and advertising campaign based on the tag line *distributing solutions*. This, in turn, led to the development of a new consultative selling model and skills training for the sales force to support the new strategy.

Implications for HRD Professionals

The Chief Learning Officer is a new organizational phenomenon and the experiences of one company certainly does not represent an irreversible trend. However, some implications for HRD professionals who seek to earn a seat at the boardroom table can be gleaned from Millbrook's experience to date.

CEO Initiative. The Chief Learning Officer position, because it breaks traditional paradigms, requires initiation and strong support from a visionary CEO and will best take root in a context of overall organizational change. This is not a concept that can be sold from the bottom up.

Credentials. In order to be considered a peer at the Executive Committee level, a Chief Learning Officer requires both a broad set of competencies and functional business experience. The advice to HRD practitioners is to career path through one or more line jobs. Managers who have met payrolls and operating budgets have credibility that allows them the latitude to leverage academic theory.

Competencies. The critical skill profile may be described by what Gayeski (1993) calls the *Renaissance communicator* - a person of broad intellectual interests with strong interpersonal skills who knows how to leverage communication technologies and draw on diverse resources across functional boundaries to help the company achieve strategic goals. Strategic thinking skills and expertise in change management are also essential.

Tolerance for Ambiguity. Many HRD professionals today remain focused on the old classroom paradigm and prefer the concrete world of the course catalogue and the Likert scale. The biggest shock of the boardroom is to learn that there are no clear answers to the strategic issues, only tradeoffs. No one has "the final plan." The world of business today is an uncharted sea of constant change. Solutions to problems often become obsolete before implemented. This calls for a high tolerance of ambiguity, flexibility, and the tenacity to persist.

Summary and Concluding Thoughts

The researchers have chosen to preserve the integrity of each others' contributions in separate sections so that the experience-based academic view and the contemporary practitioner view would be clearly distinguished. An effort to reconcile differences in writing style would have been artificial. Nevertheless, it should be obvious that patterns predicted in theory have been found in practice. The researchers are in very firm agreement that both new models for HRD leadership and new HRD positioning are needed and can work exceptionally well. Because of May's dual academic preparation and long experience as a corporate leader, there can be no implication that academic degrees in HRD alone would have qualified him for the position of CLO. But neither can it be inferred that a business degree with a few added training courses would have provided the educating skills and depth of insight required to perform this innovative, "leading part" role.

Another matter that can not be addressed with any confidence at this time is whether a conceptual model of accountability and power equivalency between CLO (performing human intellectual assets) and CFO (performing capital assets) is implied from the case study. Organizationally, it looks as if each has equal power at Millbrook, but a test of this would be the citing of actual instances when the strategic resource, expert resource, and process owner's influence overruled capital asset preservation influence. Certainly the CLO's sphere of influence has already expanded far beyond the traditional boundaries of human resource development. There is much to learn about the implications of this; in terms of time in position, this is a young incumbency. It will be interesting to see how different the position and responsibilities are a few years down the line, and whether the learning organization of Millbrook remains strong and committed.

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Integrating Work and Learning

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There is a lack of practical strategies for integrating work and learning in traditional manufacturing environments. This paper explains how integration of work and learning was identified as the "common ground" between union leadership and the management team of a local manufacturing plant. This case study highlights aspects of a federally funded workplace literacy project. The project features learning-to-learn and team learning strategies for workers.

During the next few decades, the private sector is expected to eclipse the public sector as the predominant educational institution in the United States (Davis and Botkin, 1994). Why is the private sector expected to embrace education as an important aspect of its existence? What prompts researchers to predict such an occurrence? In large part, it is because business, more so than public education, is creating changes that will help workers cope in a global economy. Leaders of the private sector are becoming increasingly aware of the connections between individual, team, and organizational learning, and corporate survival. Public education, in particular community colleges, is increasingly being called upon to work with the private sector in workforce preparation and development.

The capacity of workers to learn is becoming a key strategic advantage for American organizations. Knowledge is doubling approximately every seven years. In technical fields, half of what students learn in their early years of college is obsolete by the time they graduate. The need for workers to keep pace in the labor-force is acute. For companies to stay competitive, and for workers to stay employable, they must continue to learn (Davis and Botkin, 1994).

The intent of this paper is to neither exalt proven practices nor lend credence to popular trends in the literature. Rather, the intent is to highlight a tri-partite relationship that is based on workplace learning. The authors depict the processes and outcomes of a partnership among a community college, management of a local manufacturing plant and its union leadership. Through an arduous planning process, the union and management of the this plant found common ground between their respective strategic plans. That common ground was a commitment to make education the focal point for their co-existence. Learning and development of the workforce was identified by both sides as the critical element of the plant's survival in a global market. A learning center was created and individualized education plans were created for workers. This case study acknowledges the trials and tribulations of this endeavor, and focuses on lessons that have been learned.

Factors Associated with the Context

This case study involves a manufacturing facility that employs approximately 400 workers. The plant is located about five miles south of its closest town, with a population of 15,000 people. The region is one of the most economically depressed areas of the state. A rural community college that was founded in the 1960s serves the region. The community college had a fall 1995 head-count of 2,500 credit students and annually serves over 20,000 non-credit students.

The economic development officer of the community college had been working with this plant since 1988. One of the functions of the economic development officer was to write job training plans

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for regional industries. Managers of this local firm were interested in creating a more comprehensive job development program. They were uncertain as to whether any of their skill training was having a worthwhile effect. Plant managers were interested in creating a comprehensive training effort that could be coordinated at a higher level.

In 1994 the economic development officer became aware of the federal grant competition for workplace literacy projects. A cross-section of people representing the community college and the union and management of the local plant were pulled together to initiate the grant writing process. Focus groups were used to gather input from a variety of constituencies. These groups met six to eight times as a means of gathering input for the grant application.

The final version of the proposal was presented to the plant management team with some apprehension. The proposal called for the plant to invest considerable resources into the effort. A major concern was the use of company time for employees to develop workplace literacy skills. Although there was concern about this issue, several of the managers viewed this expenditure as a wise investment for achieving the project's objectives.

Project Start-Up: Strategies for Building Support

Key strategies were used during the project start-up that had a significant impact on the success of the project. Each year the management team develops a strategic plan and tactical plan. The strategic plan spans a three-year period and the tactical plan is for one year. For the first time, the union also developed a strategic plan. With the help of a facilitator, union and management representatives converged and identified common ground between the two plans. During these meetings, it became increasingly apparent that both the union and the management plans had striking similarities. Both parties recognized education as the means for helping them achieve their respective plans. The workplace literacy grant was seen by both union and management representatives as a means to achieve mutually beneficial goals. Training and development became a rallying point in the eyes of both union and management.

One manager commented on the significance of these early planning sessions that involved representatives of the union, management team and the community college:

> We spent several days with that activity, working through several issues and getting a lot on the table. That set the tone and jelled the working relationships that we needed.

Developing a shared understanding in the strategic planning sessions was very important. Not only was it important for the union and management leaders to find common ground, it was also significant for community college personnel to benefit from seeing and hearing their interactions. This learning contributed to the strength of the partnership. One manager commented on the need for the community college representatives to gain insight about the day to day concerns of a manufacturing facility:

> It got the community college people familiar with our culture at the start-up of this project. It helped all of us develop a collective frame of reference.

Another timely strategy during the project start-up involved staff development. Representatives from this partnership (management, union, and the community college) observed other environments in which similar projects were operating. It was important for representatives of these groups to listen to their peers at other sites talk about the trials and tribulations of such a project. By traveling together to observe other learning centers, a sense of unity was created and a shared understanding was forged. This was especially powerful for the union representatives. They were able to hear about the benefits of such a project from other union leaders. The union leaders stressed that this type of project should be jointly owned by union and management. They emphasized that this project would be good for union members. The union representatives came back from these trips as staunch advocates of this project. One union representative has since been assigned full-time to the grant as a promoter and recruiter.

Discoveries and Solutions

As with most projects, discoveries are made as activities take place and time passes. Within the first year

of operation of the learning center, several realizations occurred to the project staff. The discoveries and their solutions are depicted in the following narrative.

Varied Start-Up Times. There are 54 start times per 24-hour period for front-line workers at the plant. Workers must be scheduled into the learning center with minimal disruption of plant production. With the exception of warehouse workers, all workers who leave the line for class (or anything else) must have a replacement person to fill-in for them.

The solution to the replacement worker problem was the creation of five new positions called "grant relief." These workers must know and be able to operate effectively in all of the jobs in the manufacturing process. The manufacturing line is divided into two distinct areas: manufacturing and packaging. The relief workers are also divided in this manner to reduce the learning curve for each individual.

Individual Learning. The scheduling constraints associated with the manufacturing processes had an impact on the type of instruction that could be delivered in the learning center. Most of the instruction had to be designed for individuals, not "classes." Several of the instructors hired for this project had minimal experience individualizing instruction or teaching in a laboratory setting.

A solution to this problem included staff development for instructors that helped them understand learning styles and the characteristics of adult learners. Numerous meetings were held to help instructors develop lesson plans for specific courses and learning experiences. Instructors participated in a satellite down-link with a comparable workplace literacy project in Massachusetts. Through this exposure to a similar program, the instructors listened to accounts of familiar obstacles that had been encountered by their peers in the preceding year. This reassuring interaction deflated the pressure of unrealistic expectations, and allowed the instructors to establish a comfortable pace with individual learners.

Peak Learning Times for Workers. The learning center planned and delivered workshops on learning-how-to-learn for workers. These workshops illuminated specific attributes of the plant's workforce. A majority of the learners had a kinesthetic/tactual learning style and they preferred to learn in groups. They had specific peak learning times and many did not have a history of positive learning experiences in formal settings.

A solution was to schedule workers into the learning center during their preferred learning times. The union coordinator was the person primarily responsible for scheduling workers in the learning center. First, he gathered and sorted information regarding the preferred learning times of workers. Next, he mastered a basic spreadsheet that allowed him to organize a schedule for the learning center. Finally, he organized the relief workers in a manner that would be least disruptive to plant production.

Creating Individualized Learning Plans. The ACT Workkeys Assessment System was selected as the assessment tool of choice by the original steering committee of the project. An initial step was to profile the 43 different jobs in the manufacturing process in the plant. These assessments indicated that the workforce was not lacking in basic skills of reading, writing and mathematics to perform their jobs. However, many workers did need to enhance their "soft-skills." These skills included listening, speaking, teamwork, problem-solving, and critical thinking.

The ACT Workkeys assessments and job profiling provided a planning base for solving the learning needs of workers. Learner objectives and assessment instruments were developed by instructors with input from project staff, front-line supervisors, subject matter experts, and floor workers. Examples and problems used in the instruction were taken directly from the workplace. Individual education plans (IEPs) were created jointly by the instructors and workers. The IEP was initiated when the student walked into the learning center, and it stressed the concept of learning-how-to-learn. The learning path began at that point and crystallized when assessment results were discussed between the worker and the instructor.

Maintaining the Motivation of Learners. Workers have been attending the learning center for up to six months. Some of the workers have completed their GED and many have completed one or more courses. Motivation does not seem to be as high as it was when the learning center first opened its doors. Some workers do not seem to have an understanding of what this experience can do for them personally. Some workers are concerned that their training should be for their own personal benefit and not so much for the benefit of the company.

A solution to this concern pertained to recognition of the learners' achievements. Project staff felt that some type of formal documentation would help workers feel that they were attaining transferable

skills and not solely benefitting the needs of the company. A customized program certificate is currently being developed by project personnel. The certificate involves CEU credits, developmental education credits, and vocational education credits. The intent of this credential is to have it recognized by the local industrial base as a meaningful worker achievement.

The Significance of the Industry/Education Partnership

The central theme of this project is integrating work and learning. It has taken the individual and collective strengths of the union, management team, and the community college to pursue this theme. Each of the partners has contributed expertise and learned valuable lessons during the project's brief life-span. The benefits accrued by the partners are delineated in the following narrative.

The Community College. The possibility of succeeding with a federal grant and a local industry in this rural, economically depressed area was very appealing to its leaders. The project allowed the college to build its capacity to better serve the economic development needs of the region. Prior to this grant the college relied a great deal on brokering services that were available from external sources. The college did not have the expertise or experience to meet the varied needs of local industries. As a result of this grant, the college has been able to train its own personnel in the needs assessment process. Specifically, the college now has personnel with knowledge and experience with the ACT WorkKeys Assessment System. An administrator at the college commented on the significance of this project to related internal functions of the college:

> We are much more cohesive now in this institution. We have seen what can happen when we work together with an industry. We are redefining our roles. We are identifying our own internal and external customers and our processes.

Both the union and management representatives value the role that the community college plays in this project. The college provides an objective third party role in a culture that has a history of intense union /management negotiations. One manager stated:

> What has happened is that our management and our union people do not see the college representatives as having any other agenda than education. People do not connect the college representatives with a management group. That is important, because the union might perceive management to have an agenda that is not of interest to them. The community college presence has created a neutral territory that has a great deal of power to it. It provides a completely independent source of training.

The Management Team. This project provided the management team an opportunity to gain external support for creating a learning agenda in the workplace. This particular plant has a gain-sharing plan that is aimed at accountability at the team level. Many of the skills that are being taught in the learning center tend to enhance the skills that are needed for groups of workers to function as highly effective work teams. One manager stated:

> I am beginning to see this when I am on the floor. The workers are much more likely to talk to me about team performance and team results. In the past, I used to spend my time dealing with personnel concerns and grievances. Now, much more of the conversation that I have on the floor pertains to plant performance and team performance. We set a record yesterday for our performance from last week. Those types of things are becoming more prevalent. I attribute these performances to a variety of factors, but I am not overlooking the significance of this project.

The Union. This project has provided a means for enhancing the skill levels of its members. The union favored getting assistance in identifying major literacy problems. They embraced the notion of being able to identify people who wanted help and who were serious about improving their life skills. The union leadership saw this effort as an acknowledgment that management was moving beyond job skill training. They saw this as a means to get to the root of something that might ultimately move the production and the workforce forward. A community college administrator commented on the significance of involving union representatives in the development of training:

> Another key benefit has been the involvement of the production workers in the training. I have heard from a number of people that it has been a wondrous thing for them. It has been a real growth experience and it came at a good time. It has helped

> create better feelings about management. In addition, it has created a much greater awareness and understanding about the community college.

Toward a Common Future

At the close of the first year, this project has enrolled 30% of the eligible workers of the plant and has logged over 3,000 hours of training. Customized curriculum outlines have been completed for 6 courses and the learning center has been integrated into the work culture of this manufacturing facility. The collaborative efforts of the three partners have paved the way for continuing success. A key manager of the plant stated his optimism for the learning center:

> This is a true win-win proposition from my perspective. A lot of it has to do with general good will. So many of the things that we do pertain to improving productivity and efficiency. Many people feel that those things make people work more or harder -- and there always seems to be a negative pitch to it. This project has no negative edges whatsoever. It all has to do with education and learning. It has been a very uplifting experience. People really feel good about their involvement with it.

The impetus for this effort has been the federal funding that has functioned as seed money for the partners. The intent of this project is to have such a positive impact that the management team and the union leadership of the plant will recognize its significance and find local revenues to continue its operation. Regionally, the project is gaining recognition. Local elected officials and key representatives from area businesses have toured the learning center and/or attended meetings that featured the project. This project is a good example of what can be accomplished if companies are given incentives to bring education, labor and management together to explore the mutual benefits of lifelong learning and on-going training for their employees and partners. The future of American businesses relies on the abilities of its workers to invigorate the work-place and develop competitive advantages for themselves and their organizations (Slocum, McGill and Lei, 1994). This project has been an invigorating experience for all three of the partners.

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HRD Roles in Germany

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This study, conducted in Germany, is an extension of the study on HRD profiles in Europe, that the University of Twente started in 1992. The survey is based on a study on the job profiles of HRD practitioners in the United States carried out by the American Society for Training and Development (ASTD). An impression of new or changed HRD roles is obtained as well as a role profile for the German Instructor/Facilitator.

Since 1980 research projects have been carried out concerning the content of Human Resource Development (HRD) jobs. In the first investigations the emerging profession of HRD practitioners and their professionalisation was the incentive (Nadler, 1980). In the recent years quality and standardization of qualifications have become more and more in the focus of interest (McLagan & Suhadolnik, 1989; Arnold & Huge, 1990).

In 1992 the University of Twente started with a study on HRD Profiles in Europe. The aim of this study was to contribute to the field description of HRD in Europe. The information gathered in this study could not only contribute to the professionalisation of both the HRD profession and its practitioners but could also be useful in the light of harmonizing qualification structures (de Rijk, Mulder & Nijhof, 1994; van Ginkel, Mulder & Nijhof, 1994).

In 1992, five countries participated in the study of the University of Twente; The United Kingdom, Belgium, Northern Ireland, Italy and The Netherlands. The survey resulted in a description of the context in which HRD practitioners in those countries are working, and in role profiles, consisting of core outputs and core competencies. These role profiles were compared with the eleven role profiles compiled by ASTD in 1989 (de Rijk, Mulder & Nijhof, 1994; van Ginkel, Mulder & Nijhof, 1994).

The aim of the survey in Germany was to do the same for the German practitioners and since the environments in which HRD practitioners function have not been static since 1989, when the ASTD compiled their HRD roles, the survey is also used to obtain an impression of "new" or "changed" HRD roles.

The Design of the Role Study in Germany

In Germany the field of HRD has developed into an essential component of most organizations (Holterhoff & Becker, 1986). The increasing importance of the development of human resources, as one of the strategic factors in private enterprises and public agencies, is not reflected in the information about the HRD field in general and its practitioners in particular (von Bardeleben, Böll, Drieling, Gnahs, Seusing, & Walden, 1990). The available information in Germany in relation to HRD practitioners is incomplete and often descended from studies with another main purpose than gaining information about HRD practitioners (Arnold & Huge, 1990). Until now job profiles of HRD practitioners are indefinitive and HRD roles are indistinctive (Alt, Sauter, & Tillman, 1994).

Job Profiles of HRD Practitioners. In the survey of the ASTD, an HRD job is seen as a set of different roles with different outputs. A role is described as a functional domain defined in terms of outputs and competencies. An output is defined as a product or service that an individual or group delivers to others. A job profile consists of a description of the job content, and an overview of the competencies required to fulfil the role during the next three to five years. A competency is described as 'an area of knowledge or skill that is critical for producing key outputs' (McCullough & McLagan, 1983; McLagan & Suhadolnik, 1989).

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In the ASTD study eleven role profiles were compiled: Marketer, Needs Analyst, Researcher, HRD Materials Developer, Organization Change Agent, Instructor/Facilitator, Program Designer, HRD Manager, Administrator, Individual Career Development Advisor and Evaluator (see table 1).

Table 1 : ASTD roles *(Source: McLagan & Suhadolnik, 1989, p.20)*

1. Marketer: The role of marketing and contracting for HRD viewpoints, programmes and services.
2.Needs Analyst: The role of identifying ideal and actual performance and performance conditions and determining causes of discrepancies.
3.Researcher: The role of identifying, developing, or testing new information (theory, research, concepts, technology, models, hardware and so on) and translating the information into its implications for improved individual or organizational performance.
4.HRD Materials Developer: The role of producing written or electronically mediated instructional materials.
5.Organization Change Agent: The role of influencing and supporting changes in organization behavior.
6.Instructor/Facilitator: The role of presenting information, directing structured learning experiences, and managing group discussions and group process.
7.Program Designer: The role of preparing objectives, defining content, and selecting and sequencing activities for a specific intervention.
8.HRD Manager: The role of supporting and leading a group's work, and linking that work with the total organization.
9.Administrator: The role of providing co-ordination and support services for the delivery of HRD programmes and services.
10.Individual Career Development Advisor: The role of helping individuals to assess personal competencies, values and goals and to identify, plan and implement development and career actions.
11.Evaluator: The role of identifying the impact of an intervention on individual or organizational effectiveness.

Since 1986, when the ASTD started with this study, almost ten years have passed. In these past ten years the environments in which HRD practitioners function have not been static. Economic stagnation and organizational developments have put their marks on HRD in Europe. Although HRD is seen as an important strategic factor, companies have also discovered HRD as a cost-center. This increasing awareness of costs makes that HRD departments often have to sell their services to other departments within the company and even to Third Parties (Siegers, 1995). Besides this outsourcing of HRD, 'Total Quality Management' and the 'Learning Organization' present new challenges to HRD practitioners (Feuchthofen & Severing, 1995; Marsick & Watkins, 1992). These changing environments might have led to new or changed roles for the HRD practitioners.

For this reason, the survey in Germany, was not only used to validate the roles of the German HRD practitioners with roles compiled by the ASTD, but was also used to get an impression of new or changing roles of HRD practitioners.

Research Questions. The following research questions were formulated:

1. What are the roles of German HRD practitioners and what are their outputs?
2. Which competencies are necessary to perform the HRD roles and what level of expertise is required?
3. What are the communications between the ASTD roles and those in Germany?
4. Do German HRD practitioners hold other than the ASTD roles?

Methodology

Following the survey procedure of the University of Twente in 1992, the survey in Germany was conducted in cooperation with a professional association that comprises practitioners, working in the field of HRD. This is the Bund Deutscher Verkaufsförderer und Trainer (BDVT), a leading organization of German HRD professionals.

The questionnaire was translated and adapted to German. It had appeared that respondents had difficulties to make a distinction between their whole job and a specific role. For this reason, the division of the German questionnaire was altered to make it clearer and at the same time it was shortened. The questionnaire consisted of four parts. The first part of the questionnaire was to get a description of the context in which the German HRD practitioners function. In part two, jobs were analyzed in terms of job tasks and the eleven ASTD roles. Part three and four were centered around the outcomes and competencies described by McLagan (1989).

Results

Response group The questionnaires were send out on November 1, 1995. The results described in this paper are based on the questionnaires that were returned on December 15, 1995. The questionnaire was mailed to all members of the BDVT, residing in Germany (n=998). Fifteen members were residing in other European countries and received no questionnaire. From the 998 mailed questionnaires, 178 were returned. This is a response rate of 17.8 %, a common response rate for comparable mail surveys. Results of the follow-up conducted in the middle of December were not yet available. From the 178 questionnaires, 170 could be included in the analysis. Eight questionnaires were left out because they were not completed for various reasons.

At this point little can be said about the representativeness of the response group. As already mentioned, little is known about the whole population, the German HRD practitioner. Even the most fundamental data, like for example the total number of HRD practitioners, do not exist (Alt, Sauter & Tillman, 1994). An additional problem is the law that protects the privacy of the individual. Organizations are often not allowed to give the scarce information they possess to a third party.

New or Other Roles of German HRD Practitioners. The respondents were asked whether there were other roles than the eleven ASTD roles in their job.

Of the 170 respondents 62 (36.5%) answered that they fulfil, in their job, one or more roles different from the eleven ASTD roles. To be able to categorize the roles, based on the description that the respondents gave, the following four categories were defined.

1. Roles of the ASTD; These roles were mentioned as 'different', but from the description it appeared that it was one of the eleven original roles of the ASTD.
2. Roles inside the Human Resource area; Roles situated in the HR area but not in the HRD area as defined by McLagan. The HRD area is within the larger human resource area. This larger area includes the other organizational functions that affect people's performance but do not use development as their primary mechanism of influence (McLagan, 1989, p.3).
3. Roles outside the HR area; Roles that are not situated in one of the area's of HR as described in the Human Resource Wheel (McLagan, 1989, p.6).
4. Potential new HRD roles; New HRD roles that are situated in the HRD areas; Training and Development, Organization Development and Career Development (McLagan, 1989, p.6).

Table 2 : New or Changed Roles of German HRD practitioners (n=62)

Category	Frequency	Percentage
1. Roles of ASTD	31	40.8
2. Roles inside Human Resource area	10	13.2
3. Roles outside Human Resource area	15	19.7
4. Potential new HRD roles	20	26.3
(missing=0)		
Total	86*	100.0

(* respondents could name more than one role)

Roles in category 1. Roles comparable to the role of INSTRUCTOR/FACILITATOR and the role of HRD MANAGER were mentioned both six times. The NEEDS ANALYST was mentioned four times, the RESEARCHER and ORGANIZATION CHANGE AGENT both three times. Roles comparable to the MARKETER, HRD MATERIALS DEVELOPER and PROGRAM DESIGNER were mentioned twice. ADMINISTRATOR, CAREER ADVISOR and EVALUATOR once.

Roles in category 2. In this category, five times roles from the area of EMPLOYEE ASSISTANCE were mentioned, two times roles from the HR RESEARCH AND INFORMATION SYSTEMS area and two times the area SELECTION AND STAFFING.

Roles in category 3. The roles mentioned in this category were management roles, other then the HRD MANAGER (seven times) and marketing roles outside the HRD area (six times).

Roles in category 4. In this category two groups of roles were mentioned. The first group was named 'MERCHANT' and the second 'COACH'.

The role of *Merchant* seems to be a combination of elements of four ASTD roles, the MARKETER, HRD MANAGER, ADMINISTRATOR and EVALUATOR and some new elements needed to 'run a business'.

The role of COACH differs from the ASTD role of INSTRUCTOR/FACILITATOR. The role of INSTRUCTOR/FACILITATOR stresses on presenting information, directing structured learning experiences, and managing group discussions and group process. A COACH, according to the seven respondents that mentioned it as one of their roles, 'accompanies' an individual or group to a common goal.

Roles that Jobs consist of

The respondents were asked to mark the main roles that their job consist of. Four roles were mentioned by at least 50% of the respondents (n=170). These are the roles of the NEEDS ANALYST, the ORGANIZATION CHANGE AGENT, the INSTRUCTOR/FACILITATOR, and the PROGRAM DESIGNER.

The main roles appear to differ per role on which most working time is spent on. As table 3 shows, 121 of the 170 respondents spend most of their working time as INSTRUCTOR/FACILITATOR. The main roles of this group correspond with the main roles of the whole group respondents. To get a impression whether there is a difference between jobs performed internal and external, the group that spends most time as INSTRUCTOR/FACILITATOR was split up. Internal are those practitioners employed by an organization which core business is not training and development. External are the independent practitioners and practitioners employed by training and development organizations. The division of the group that spends most of their working time as *Instructor/Facilitators*, in external and internal working, learned that the role of ORGANIZATION CHANGE AGENT is named by 80% of the external (n=76) and by 37.5% of the internal instructors (n=40) (Five instructors could not be assigned to being internal or external working, they were left out of this analysis).

In the group that spends most working time as ORGANIZATION CHANGE AGENTS(N=10), AT LEAST 50% OF MARKED THE FOLLOWING FOUR ROLES; MARKETER, INSTRUCTOR/FACILITATOR, ORGANIZATION CHANGE AGENT and HRD MANAGER. The group that spends most working times as MARKETERS (n=8) named also four roles; MARKETER, NEEDS ANALYST, ORGANIZATION CHANGE AGENT and INSTRUCTOR/FACILITATOR. The main roles of the group that spends most time as HRD MANAGERS (n=8) are, NEEDS ANALYST, INSTRUCTOR/FACILITATOR, ORGANIZATION CHANGE AGENT and HRD MANAGER. The group spending most working time as PROGRAM DESIGNERS (n=6), have the following main roles,

NEEDS ANALYST, HRD MATERIALS DEVELOPER, INSTRUCTOR/FACILITATOR and PROGRAM DESIGNER. The other roles are not included because of the low number of respondents with these roles as role that takes most of their working time.

Table 3 Role that takes most time (n=170)

Role	Frequencies	Percentage
Instructor/Facilitator	121	71.2
Organization Change Agent	10	5.9
Marketer	8	4.7
HRD Manager	8	4.7
Program Designer	6	3.5
Administrator	3	1.8
Developer of HRD material	4	2.4
Researcher	2	1.2
Merchant	2	1.2
Needs Analyst	0	0.0
Individual Career Advisor	0	0.0
Evaluator	0	0.0
(missing=6)		

The role that takes up most of the working time doesn't need to be the most important role in a job. There can be a role that has for instance more impact. According to 37.6% of the respondents (n=64), the role that takes most working time is at the same time their most important role. For 48.2% of the respondents (n=82) the role that takes most working time is not their most important role. This difference is not significant (Z(n=146)=1.41, 2-Tailed P=.1594). No most important role was mentioned by 24 respondents (14.1%).

As most important role, the role of INSTRUCTOR/FACILITATOR was named most often (32.4%), followed by the ORGANIZATION CHANGE AGENT (14.1%). Other roles than the ASTD roles were mentioned together 17 times (11.3%).

As role that would gain importance in the near future, the role of ORGANIZATION CHANGE AGENT was named most often (25%).

Outputs. Compared to the other roles, the role of INSTRUCTOR/FACILITATOR is overrepresented (121 of the 170 respondents). The outputs of the total group of respondents are dominated by this one role. For this reason no table will be presented with outputs of the German HRD practitioner in general. The next tables present the outputs that German *Instructor/Facilitators* realize and the competencies required according to this group.

The criterion for assigning outputs to a the role of *Instructor/Facilitator* was that at least 70% of this group (n=121) realizes the specified output (see table 4). The same criterion for assigning outputs and competencies to a role were used in the survey of the University of Twente in 1992 (de Rijk, Mulder & Nijhof, 1994; van Ginkel, Mulder & Nijhof, 1994). To get more insight into differences between internal or external working *Instructor/Facilitators*, the group was split up. The division showed differences for five of the outputs (marked with *) that were assigned to the role *Instructor/Facilitators* based on the results of the whole group.

Less than 70% of the external instructors realize the output 'Information on Future Forces and Trends'. Less than 70% of the internal instructors realize the outputs 'Group Awareness of their own Group Process' and 'Concepts, Theories, or Models of Development or Change'. According to more then 70% of the internal instructors, ' Individuals with new Knowledge, Skills, Attitudes' and 'Facility and Equipments Selection' belong to the outputs of their role. Of the output 'Individuals with new Knowledge, Skills, Attitudes' should be said that the percentages, 68.4% for the external instructors and 70.0% for the internal instructors, are very close to each other and near to the criterion of 70%.

Table 4 Outputs realized by German Instructor/Facilitators

		Total (n=121)	Extern (n=76)	Intern (n=40)
		≥ 70%		
Behavior Change from a Counseling/Advising Relationship		94.2	96.1	90.0
Presentation of Material		94.2	94.7	92.5
Feedback to Learners		88.4	90.8	85.0
Facilitation of Group Discussions		86.8	85.5	87.5
Facilitations of structured Learning Events	86.0	85.5	90.0	
Transfer of Development or Career Planning Skills to the Learner		82.6	89.5	75.0
Instructor/Facilitator Guides		80.2	75.0	90.0
On-site Programme Support and Staff Management		77.7	72.0	85.0
Concepts, Theories, or Models of Development or Change		76.0	78.9	67.5*
Resolved Conflicts for an Organization or Groups		76.0	78.9	72.5
Group Members' Awareness of their own Group Process		75.2	80.3	67.5*
Functioning Equipment		74.4	72.4	82.5
Individual Action Plans for Learning Transfer	72.7	76.3	72.5	
Information on Future Forces and Trends		71.1	69.7	75.0*
		<70%		
Individuals with new Knowledge, Skills, Attitudes		69.0	68.4	70.0*
Facility and Equipment Selections		55.2	47.4	70.0*

Competencies. For the competencies a criterion has been used that at least 50% of the group thinks that the competence is very important (see table 5). For each of the competencies the level of mastery for an excellent performance in the role was added. For those competencies a division of instructors in two groups, gave only a difference in one competence. According to 68.4% of the external instructors, Negotiation Skills is a very important competence, only 42.5% of the internal instructors thinks the same.

Table 5 Competencies demanded from German Instructor/Facilitators (n=121)

		≥ 50%		demanded level
Feedback Skill		84.5		advanced
Observing Skill		84.5		advanced
Performance Observation Skill		81.0		advanced
Coaching Skill		80.2		advanced
Adult Learning Understanding		79.3		advanced
Presentation Skill	76.7		advanced	
Questioning Skill	76.7		advanced	
Training and Development Theories and Techniques Understanding		75.9		intermediate
Relationship Building Skill	75.0		advanced	
Objectives Preparation Skill		75.0		advanced
Group Process Skill		74.1		advanced
Self-Knowledge		70.7		advanced
Intellectual Versatility		64.7		intermediate
Negotiation Skill	59.5		intermediate	
Competency Identification Skill		59.5		intermediate

Comparison between the German and the American Role Profile of the Instructor/ Facilitator. The eleven ASTD roles are functional groupings of outputs. To each of these roles belongs an unique list of outputs. The outputs of the German *Instructor/Facilitator* were compared with the outputs of the ASTD *Instructor/Facilitator*.

The comparison between the competencies demanded from the German *Instructor/Facilitator* and the same ASTD role, shows a substantial resemblance (table 7).

Table 6 Outputs German Instructor/Facilitator and ASTD Role

Outputs Instructor/facilitator	German Role	ASTD role
Presentation of Material	x	x
Functioning Equipment	x	
Concepts, Theories, or Models of Development or Change	x	
Facilitations of structured Learning Events	x	x
Feedback to Learners	x	x
Test Delivery and Feedback		x
Transfer of Development or Career Planning Skills to the Learner	x	
Facilitation of Group Discussions	x	x
Behavior Change from a Counseling/Advising Relationship	x	
Resolved Conflicts for an Organization or Groups	x	
Information on Future Forces and Trends	x	
On-site Programme Support and Staff Management	x	
Facilitations of Media-based Learning Events	x	
Instructor/Facilitator Guides	x	
Group members' Awareness of their own Group Process	x	x
Individuals with new Knowledge, Skills, Attitudes.		x
Learning Environment		x
Individual Action Plans for Learning Transfer	x	x

Table 7 Competencies demanded from Instructor/Facilitator

Competencies	German role		ASTD role	
Technical				
Adult Learning Understanding	x		x	
Competency Identification Skill	x			
Objectives Preparation Skill		x		x
Performance Observation Skill	x		x	
Subject Matter Understanding				x
Training and Development Theories and Techniques Understanding		x		x
Interpersonal				
Coaching Skill		x		x
Feedback Skill		x		x
Group Process Skill		x		x
Negotiation Skill		x		
Presentation Skill		x		x
Questioning Skill		x		x
Relationship Building Skill		x		x
Intellectual				
Self-Knowledge		x		x
Intellectual Versatility	x		x	
Observing Skill		x		x

Conclusions

Despite the preliminary character of the data some conclusions can be made at this stage. Most of the conclusions only involve the role of Instructor/Facilitator and should be interpreted carefully.

New or changed Roles. The data don't give enough support to conclude that there are new or

changing roles in HRD. Still, 36.5% of the respondents had the impression that their job contained something more than the eleven ASTD roles. This is partially explicable because HRD practitioners function within the larger field of the Human Resource Management and the boundaries around HRD are not always clear. Besides this, the two potential new roles of the *Merchant* and the *Coach* remain. For both roles no reliable role profile could be compiled because of the low representation. Therefore no judgment can be made whether they are new roles or not. Further, roles were mentioned as being new, while comparable to the existing ASTD roles. This might indicate that the role definitions of the ASTD roles do not harmonize (or do not harmonize anymore) with the German roles.

Roles of German HRD Practitioners. The role of *Instructor/Facilitator* was mentioned most often as role that takes up most working time and was part of all the combinations of roles that were found. According to McLagan (1989), competencies determine the roles and range of outputs that a person can perform. Jobs that include roles with dissimilar competencies require people with a broad range of competencies. The role combinations found in this survey point in this direction. The role of *Instructor/Facilitator* was often combined with the roles of *Organization Change Agent*, *Needs Analyst*, and *Program Designer*, roles that according to McLagan require few similar competencies. The jobs of external working *Instructor/Facilitator* seem to be broader than the jobs of internal working *Instructor/Facilitator*.

Comparison between the ASTD role of the Instructor/Facilitator and the German Role. The role profile of the *Instructor/Facilitator*, the only role profile that could be established, shows great similarity in required competencies but large differences in outputs compared to the ASTD profile. The German role profile shows a broad but very traditional role.

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HRD Roles in Finland - Preliminary Results

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To investigate the typical roles of Finnish HRD practitioners, a survey based on ASTD Models for HRD was conducted (N=461). According to preliminary data the Model seems to be valid in Finnish context. The most important HRD roles in Finland seem to be similar to the roles in other European countries. The role of organizational change agent as the most frequently chosen important role reflects the current situation in working life. Organizational work context and educational background did not seem to be associated with the role.

In Finland human resources development (HRD) has been more and more recognized as an important investment in the world of work. Especially the recent worldwide changes in working life like technological developments, melting of the hierarchies into flatter and flexible organizations, customer and quality orientation and change in values and attitudes towards work (Achtenhagen, 1994; Kasvio, 1994) have had a strong impact on this increased importance. These changes have stimulated new, human resources development oriented responses and interventions in workplaces and increased HRD's strategic importance in organizations (Juhela, 1994). The increased interest can also be seen in statistics, which show that between 1982 and 1989 the amount of employees that were provided training increased from 565 000 to 900 000, in 1991 the amount was almost 800 000 which was about 42% of the total labor force (Statistics Finland 1993).

The development of theory and practice of HRD in work organizations in Finland during the last few decades can be described by using the definition of HRD by Nadler & Nadler (1991). Basically HRD has been development of skills, knowledge and attitudes of employees by organizing learning experiences. This activity has been provided by employers. In the beginning of the eighties HRD was seen as a new and specified area of adult education which is closely related to working life. Characteristic for HRD was that the main area of activity was training, which was focused on the development of functional and ideological qualifications in the present job. The qualifications were defined by the organization (Virkkunen, 1980, 101-102; Nadler & Nadler 1991, 4). The main purposes of HRD were to create, maintain and develop the work related competencies of the employees and the cooperation and communication in an organization. One specific feature of HRD was that adult educational theory played a significant role as a theoretical foundation. Even though HRD was seen as one part of the personnel management in an organization, it was seen as an activity which is focused on intentional and formal learning and even incorporating a pedagogical or andragogical perspective into management of organizations (Miettinen & Virkkunen 1981, 3-6).

Towards the nineties the orientation has changed more from training to development (Nadler & Nadler 1991, 4) and at the same time from traditional to strategic HRD (Rothwell & Kazanas 1994, 16-18). The main purposes of HRD are now focused on facilitating the ability to learn and develop on the job on the individual, group and organizational levels and to meet the changes in a creative way (Vepsäläinen 1994, 67-72). Development and learning oriented HRD interventions based on concepts like "learning organization" can be assumed to have an impact on the role of HRD and HRD practitioners in work organizations. Probably the role of a deliverer of training is not enough any longer since today's flexible organizations with lean production demands the role of and competencies in facilitating the change and supporting an organization's ability to learn (see e.g. Watkins & Marsick 1992).

One way to investigate the HRD function in work organizations is through the roles of the HRD practitioners. HRD practitioners are hired full time HRD jobs or positions or other jobs and positions where they have to part time deal with HRD issues. Role is the personal approach that practitioners have in their job in certain organizational contexts. Roles are behaviors associated with a job and they show which values or theories guide the job (Sredl&Rothwell 1987, 57-58). For example HRD practitioners can be said to be in the positions where they have to constantly identify the needs for

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changes and learning and to work with the needs and facilitate the change. That can then show in their behavior and values in the job. Almost all the research and writing about HRD practitioners' roles and competencies emanates from the USA (see e.g. Pinto & Walker 1978; McLagan & Bedrick 1983; McLagan 1989). Especially the ASTD research on the Models for HRD carried out by McLagan (1989) has been widely used as a model for investigating the roles of HRD practitioners (e.g. de Rijk, Mulder & Nijhof 1994; van Ginkel, Mulder & Nijhof 1994). The ASTD research is based on job analysis methodology and has produced descriptions of HRD functions, tasks and roles.

In Finland, especially the HRD practitioners in the public administration have been studied. Those studies have focused on the functions and tasks and to some extent on the roles and the educational and theoretical background of HRD practitioners. The development of the functions and tasks of HRD practitioners in public administration have been described as a change from designing and organizing training to an investigative facilitator or instructor (Venna & Rautiainen 1990, 161-164). Even though there are no formal degree programs in HRD, it seems that among the HRD practitioners in public administration educational theory has recently played an increasingly significant role as a theoretical foundation for work. The amount of educational or adult educational studies has increased from 10% to 80% over the period from the eighties to the nineties. The HRD practitioners have estimated that in the nineties their functions will be more holistic in the organization, including the roles of consultant, expert and coordinator of development and change agent (Suurpää & Valkeavaara 1992, 75-82).

Although in Finland research has been devoted to HRD functions and tasks, not so much is known about the HRD roles. There is also little research based information about HRD practitioners both in private and public sectors. This research will present the preliminary results of a survey conducted among the HRD practitioners in order to examine which are the typical roles, outputs and competencies of HRD practitioners and which organizational and personal (educational background) factors possibly determine the roles of HRD practitioners. In this study the analysis of HRD practitioners' work is done adopting the Models for HRD (McLagan 1989, 2-11) where job analysis consists of a role analysis and a description of the possible job contents and the competencies required to fulfill the described job. The role analysis lists a detailed descriptions of 11 roles and the role contents that can be distinguished within a job. To identify the job content the model concentrates on outputs, since they are controllable products and services that HRD practitioners are paid to produce or deliver. The outputs are also grouped according to roles. The competencies in this model are linked to the outputs in HRD work and HRD practitioners need to have them and acquire them in order to perform. These competencies are grouped into technical, business, interpersonal and intellectual competencies that are typical to the field of HRD. On the basis of this model it is possible to develop typical job profiles for HRD practitioners by connecting the role and the related outputs and competencies into profiles.

Research Questions

Four main research questions were addressed in this study: 1) Who are the HRD practitioners in Finland, what kind of is the educational background and the organizational work context of HRD practitioners? 2) Which are the most important roles in HRD practitioners' work, which are the mostly produced outputs and which are the most important competencies, what kind of role profiles are found? 3) Are there any other roles than those described in the model that can be identified in the HRD work and are they important? and 4) Are the roles related to different organizational work contexts and educational background?

Method

Target population. The target population in this study was the HRD practitioners working in the field of HRD in different work organizations in private and public sectors and in the different branches of industry in Finland. The exact group of HRD practitioners in Finland is difficult to define due to lack of formal training in the field and due to lack of common work titles. Some idea of the total amount of the practitioners who might work in the field of HRD is given by the following examination of the statistics. Since HRD is seen as a part of the adult education system in Finland, HRD practitioners are

identified as one typical group of adult educators (National council for Adult education 1989, 4-7). According the 1990 statistics (Finland Statistics 1993) out of all the adult educators about 3000 persons can be placed under the work title of "training manager" which includes automatic data processing (ADP) trainers, marketing trainers, consultants, training managers, program designers and teaching managers (Statistics Finland 1987). The category of "other trainers" includes about 4000 persons. For example in the study of the Finnish HRD practitioners in the public sector, the most frequently used work titles were program designer, training manager and trainer (Suurpää & Valkeavaara 1992, 79). In addition, persons working as HRD managers (3300) might also to some extent be involved in HRD function.

Sample. As the definition of the target population is complicated in this study, members from two professional associations were used as the target population. The two associations are The Finnish Association for Human Resource Management (Henry ry., N=776) and The Association for Trainers in Public Administration (Julkishallinnon kouluttajat ry., N=265). The use of professional associations helps to identify the members of the target population, although at the same time there is a risk of selecting a biased sample since members of association may differ in important respects from non-members (Borg & Gall 1989, 218). The associations are voluntary and their aim is to promote the professional development of their members and the professional discussion in the field. Thus, the use of these associations as representatives of the whole profession may be a benefit, since the members can be assumed to be the ones who are interested in defining the role and expertise of their own work. The sample (N=700) was selected from the membership directories of both associations. The sample includes all the members of the Association for Trainers in Public Administration (N=239) except those who were also members of the other association in this study. The sample from the Finnish Association for Human Resource Management (N=461) was selected on the basis of whether the member had allowed her/his contact addresses for non-association purposes. In both cases those who were pre-tested were left out.

Instrument. The questionnaire employed in this study was based on the HRD model of McLagan (McLagan 1989), which permits the investigation of the roles, outputs, competencies in HRD work from the HRD practitioners' point of view. It also was similar, with some adaptations, to the questionnaire used in the HRD profession for the 90's research project at the University of Twente. The questionnaire consists of five sections: 1) description of job, 2) roles within job 3) outputs within the role that takes up most of the working time 4) competencies within the role that takes up most of the working time and 5) educational background and work experience. The questionnaire required the respondent to describe her/his work, educational background and work experience and to indicate the roles in the work and especially the role that takes up most of the working time and outputs and competencies in that role. It was expected that on the basis of results, it will be possible to find out the typical role profile for the HRD practitioner in Finland.

The terms used for roles, outputs and competencies (McLagan 1989) in the questionnaire were translated into Finnish. The questionnaire was pre-tested in Spring 1995 by interviewing four experts in the field of HRD in Finland and by sending the questionnaire for the pretest sample (N=27) consisting of participants of a Program Design Course for HRD practitioners. The response rate in pretest was 35%. On the basis of the interviews and the pretest feedback some adaptations were made in the content of the questionnaire and in the placing of the questions in order to make the questionnaire clearer and easier to answer. The questionnaire was also discussed and evaluated in cooperation with the HRD profession for the 90' research project at the University of Twente in order to achieve comparability between data collected from different European countries.

Procedure. Each of the 776 members of The Finnish Association for Human Resources Management was mailed a letter in the beginning of October 1995 informing about the research and encouraging the members to participate. Selected 461 participants were mailed the questionnaire in the end of November 1995. Due to a changed timetable of sending the membership newsletters within the Association for Trainers in Public Administration the questionnaires for 239 participants will be sent in January 1996. By the 15th of December 1995 the response rate was 15% (N=69). The data received from those respondents are used in this paper as preliminary data. These data were analyzed by using the SPSS statistical program. Since only preliminary data were available, analysis focused on description, by counting frequencies and summarizing the results.

Results

Since only the preliminary data (response rate 15%, N=69) from one of the two associations selected in this study were available, the results should be viewed as tentative. Also, at this phase of the study, it is hard to estimate how representative of the total association the sample was. All the respondents (N=69), who were involved in HRD tasks to some extent, were included in the analysis.

Description of the preliminary response group. The preliminary response group included more males (55,9%) than females (44,1%), with 1 respondent providing no information on gender. More than half of the respondents (52,2%) were 45-54 years old, 29% were between 35-44 years and 18,8% were 55 years or more. Since the association investigated represents the private sector also the majority of respondents (75%) came from the private sector, while 23,6% represented municipal and state administration. The main branches of industry and business that the respondents represented were manufacturing (31,1%), education and research (26,2%) and finance and insurance (11,5%), 8 respondents did not provide information on the branch of industry and business.

Types of HRD practitioners. Employed as an internal HRD practitioner (responsible for the HRD function in their own organization) worked 68,3% and as an external HRD practitioner (in organizations offering HRD products) worked 31,7% of the respondents. The information was missing in six cases. Half of the internal HRD practitioners spent 50% or more of their working time on HRD tasks, one third spent 24% or less. More than half (56,5%) of the external HRD practitioners spent 50% or more and 17,7% less than 24% of their working time on HRD tasks. The formal job titles range from trainer/teacher to manager. The category "other manager" including executive, project, quality, district, research etc. manager was the largest (36,8%) among the respondents. HRD managers constituted 22,1% and HRM managers 17,6% of the respondents. The majority of internal HRD practitioners worked as a HRM or other manager and about half of the external HRD practitioners worked as a trainer or consultant, about one fourth as a HRM or other manager. It appears that internal HRD practitioners work more in another capacity than as specific HRD managers and time spent on HRD tasks can vary from 100% to under 10%. External HRD practitioners work more as trainers or consultants than as managers, which describes the actual nature of their work. This result suggests that the HRD function in organizations is more frequently located into HRM departments or on executive level than traditionally into specified HRD departments.

Educational background. The level of education among the HRD practitioners is high, since 82,6% of the respondents had a university degree and 8,6% had a post-graduate university degree. The educational background of the HRD practitioners ranges from technical and natural sciences to education and adult education. Economics and business studies seem to serve as the most common educational background in HRD work, since 29,9% of the respondents named those as their field of education. Administration studies had been pursued by 14,9% and educational or adult educational studies only by 10,4%. This is not consistent with the earlier findings in the public administration that educational sciences are a significant theoretical background in HRD work.

Almost all of the respondents (97,1%) had ten years or more of experience after their education and 72,5% had worked those years in the field of HRD. The HRD practitioners seem to be well experienced in the world of work in general and in their own field. Professional further education in the field of HRD seems to play an important role among the HRD practitioners since 75,4% of the respondents mentioned that they have had some further professional education, which has increased their professional competencies in HRD. Most often as such further education was cited various professional development training in HRD issues, adult education and training methods (14,8%) and special "trainer training" (10,5%). About one third of the respondents could not name any special further education but just a collection of different seminars, conferences etc. Even though educational sciences were not very common in the educational background, their role in further professional development seems to be important.

Roles, outputs, competencies. The five roles from the roles of McLagan (1989) that were most frequently used by respondents in responses describing the HRD work were organizational change agent (83,3%), needs analyst (69,1%), marketer (54,4%), instructor/facilitator (44,1%) and program designer (44,1%). In addition, 33,9% of the respondents thought that there were other roles than the ones used by McLagan that can be used to describe the HRD work. On the basis of the responses three new roles that can describe the HRD work were identified: the roles of coach (the role of coaching,

encouraging and supporting individuals and work groups in different stages of work and development of work), reflective practitioner (the role of supporting reflective thinking and learning on the individual, work group and organizational levels) and consultative communicator (the role of communicating between employees and management and integrating the aims of human resources and organization).

The most important role in HRD work was identified by asking which role takes the most of the working time. Table 1 presents those most frequently chosen HRD roles.

Table 1. The HRD roles that take most of the working time (N=69)

Organizational change agent - The role of influencing and supporting changes in organizational behavior.	31,9%
HRD manager - The role of supporting and leading a group's work and linking that work with the total organization.	14,5%
Program designer - The role of preparing objectives, defining content and selecting and sequencing activities for a specific intervention.	11,6%

Approximately one fourth of the respondents (24,6%) spent half or more and 43,5% spent 25-49% of their working time in the most important role. The respondents were also asked whether there is a role that does not necessarily take most of the working time but is in other ways the most important and meaningful in the HRD work. The role that was most frequently chosen in this question was again the organizational change agent (50%). The new roles were chosen in both cases only by a few of the respondents. The role of organizational change agent and appearance of new roles appear to confirm the assumption that the HRD function is more and more focused on facilitating the change in a creative way and supporting individuals' and organization's ability to learn.

Table 2 presents the key outputs by HRD practitioners in their role that takes most of their time in HRD work. The table shows the most commonly chosen outputs that are realized by 70% or more of the respondents (there were altogether 35 outputs that were chosen by half or more of the respondents). The outputs marked with a * -sign are consistent with the outputs of organizational change agent (McLagan 1989), which was also the most frequently chosen role among the HRD practitioners.

Table 2. Outputs by Finnish HRD practitioners in % (N=69)

Recommendations to management regarding HRD systems	84,1 *
Teams	79,7 *
Concepts, theories, or models of development or change	78,3
Designs for change	76,8 *
HRD policy	75,4
Client awareness of relationships within and around the organization	72,5 *
Presentation of material	71,0 *

Table 3 presents the most important competencies that HRD practitioners need to have in order to perform in the role that takes most of the working time and the level of expertise needed in each competency. Only the competencies that are valued very important by 60% or more by the respondents are included. The level of expertise is chosen by the majority of respondents, which valued the competency very important.

Table 3. The core competencies of Finnish HRD practitioners (in %)

1. Adult learning understanding(N=67)	68,7	intermediate
2. Business understanding(N=67)	77,6	advanced
3. Organization behavior understanding(N=65)	60,0	advanced
4. Organization understanding(N=65)	72,3	advanced
5. Feedback skill(N=67)	67,2	advanced
6. Presentation skill(N=65)	64,6	advanced
7. Visioning skill(N=66)	66,7	intermediate
8. Data reduction skill(N=67)	68,7	advanced

It seems that business competencies (2., 3., 4.) and interpersonal competencies (5.,6.) play a significant role in HRD practitioners' job and they have to be mastered on an advanced level, which means broad and deep understanding and skills and functioning in complex, varied situations. This result suggest that adult learning understanding is not so significant as business competencies, even though professional further education in training and development is common among HRD practitioners.

Table 4. Role profile for organization change agent

Organization change agent (N=22)

Outputs: presentation of material, strategies for analyzing individual or organizational functioning, concepts, theories or models of development or change, sales/business leads, HRD policy, behavior change from a counseling/advising relationship, resolved conflicts for an organization or groups(*), information on future forces and trends, changes in group norms, values culture(*), teams(*), designs for change(*), plans to implement organizational change(*), HRD long-range plans, recommendations to management regarding HRD systems(*), recommendations for needed change in individual, work group or organizational performance, implementation of change strategies(*)

Competencies: business understanding, organization understanding, feedback skill, negotiation skill, presentation skill, data reduction skill and visioning skill

Table 4 presents the role profile of the organizational agent. Outputs and very important competencies chosen by 70% or more of the respondents are taken into the profile. Table shows that the role profile is quite consistent with the role profile of organizational change agent in Models for HRD, but the Finnish HRD practitioners chose more outputs. However, 7 out of nine outputs of organizational change agent are included in the profile (marked with *). There were less (very important) competencies chosen, but all of them belong to the role profile of organizational change agent (McLagan 1989, 52).

Despite the fact that the preliminary data were too small for reliable testing of possible associations between variables, chi-square test was used in preliminary testing to describe the possible association between some variables. Even though categories were amalgamated in order to increase the reliability and validity, the data appeared to be too small in some cases. Table 5 shows that variables describing organizational work context and educational background seemed not to be associated with the choice of a HRD role, in this case organizational change agent. Also sex had no significant effects in interaction with form of employment and educational background on the choice of organizational change agent as an important role. These results have to be taken only as indicative, no final conclusions can be based on these results. However, there seems to be a tendency for working sector(private, public) and field of professional further education to be related to the role of the organizational change agent. Analysis with the final data will give the possibility to test these tendencies of associations and non-associations.

Table 5. Chi-Square test of the role of organizational change agent by form of employment, formal job title, working sector, line of business and industry, educational background, professional further education, field of professional further education.

	organizational change agent			
	chi	DF	sig.	N
employed	.32	1	.57	63
formal job title	1.13	2	.57	68
working sector	1.45	1	.23	67
line of business and industry	3.35	2	.67	42
educational background	1.41	3	.70	66
professional further education	.002	1	.96	65
field of professional further education	5.23	2	.07	29

Discussion

This research investigated the HRD function in Finland through the roles of HRD practitioners. Typical role profiles with roles, outputs and competencies according to the ASTD Models for HRD were searched. The findings show that the most important role for HRD practitioners was the role of organizational change agent. This result is consistent with earlier results of role profile studies in Europe, except that the role of instructor/facilitator was not among the three most frequently chosen most important roles. The role profile was quite consistent with the Models for HRD. Also three new roles describing the HRD work were identified on the basis of data: coach, reflective practitioner and consultative communicator. The HRD practitioners seem to be internally directed more to HRM or other managerial positions than to specified HRD positions. External HRD practitioners worked most as consultants or trainers. In terms of educational background business and administration studies were more common than educational studies, this was also seen in competencies which were chosen as very important in HRD work. Organizational and personal variables (educational background, sex) did not seem to be associated with the role.

One possible conclusion is that the role of organizational change agent reflects the current situation in the world of work, where HRD practitioners work in the positions where they have to constantly identify the need for changes and to facilitate the changes. Also the appearance of the new roles confirms that HRD functions are characterized to some extent with supporting change processes and reflective thinking and learning. The positions of internal HRD practitioners also seem to be consistent with the idea of a strategic position of HRD in organizations. The result that organizational work context and educational background are not associated with the role of organizational change agent can be explained by assuming that current trends in working life are general and experience in work has more impact on HRD roles than original educational background. On the other hand the field of professional further education showed some tendency to be associated with the role.

This study has taken a step in the direction of defining the field of HRD in Finland through the eyes of HRD practitioners. Since these results reported here are only tentative due to the small preliminary response group, restricted mainly to the private sector, it is possible of course that analysis with final data may produce different results.

After the analysis of the final data it is important to take one step further from defining the field by role analysis to investigating the nature of HRD expertise in more qualitative sense. Even though this kind of analysis gives a good information about the workplace performance and expertise (see e.g. Swanson 1995, 100), it is important to focus on results and effectiveness of the HRD functions and on HRD as a process of expertise. The HRD practitioners work constantly in change processes which are characterized by reflectivity and progressive problem solving (Bereiter & Scardamalia 1993, 82-100), thus process oriented investigation of HRD expertise is needed.

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Beyond Training to The New Learning Environment: Workers on the High-Involvement Frontline

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In the new global marketplace, the effective use of advanced manufacturing requires workers with skill and also understanding of the more basic competencies and a whole organization perspective. The link between an individual's learning capabilities and an organization's learning and adaptation is highlighted in this study of workers in a new training program, as a company makes the transition from training to learning and as the individuals learn to continuously grow, develop, and problem solve to the benefit of all.

Introduction

How do individuals get into the mindset of continuously learning? Just what is the connection between individuals improving their learning and the organization being able to utilize this capability?

These are not easy questions to answer. As you will read in this ethnographic study, workers on the shop floor of a manufacturing company make the transition from the Tayloristic model of worker response to one that encourages their individual input and decision making abilities. In fact, the employees' ability to entertain a "systems" perspective is also delineated. Being able to move in this direction is vital for a company's growth and viability.

Theorists recognize that companies develop repertories of capabilities which enable and constrain their responses to changing environments (Cespedes, 1995). This link between an individual's learning capabilities and an organization's learning and adaptation is highlighted in this study as the company makes a transition from training to learning and as the individuals learn to continuously grow, develop, and problem solve to the benefit of all.

Relationship to Other Research

Progression to high-involvement requires workers who are motivated to be actively involved in a new learning environment. This type of learning environment is all-pervasive and reflects the overall migration to a knowledge economy. In knowledge economies, the rapid pace of technological change means that learning must be constant and that education must be updated throughout one's working life. People have to increase their learning power to sustain their earning power (Davis & Botkin, 1994).

Worker education can be the catalyst affecting the change to high involvement in an organization. Schein (1985) writes of the need to break the "tyranny of culture" in a mature organization. To effectively make the evolution to a high-involvement workplace, a company must work to bring about that environment needed to foster learning, insight, and participation. "The best organizational change programs approach making changes as a learning experience" (Lawler,

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1992, p. 345.) The new training goal is to train workers to develop as technology continues to change (Ashburn, 1986; Beard, 1991a; Beard, 1991b). Training programs must now be judged in terms of empowering workers with direct responsibility for decisions affecting production and quality (Carnevale, 1991).

Data verifies the linking of education, training, organizational structure, productivity and income (Carnevale, 1991). As published by the Conference Board (1995), Forbes' "Annual Report on American Industry" rates companies on measures such as profitability, growth, sales, net income, and profit margin. Using the report's profitability measure, "high" performance enhancement companies were found to outperform those with few or no enhancement programs.

Although production worker training forms an integral part of the Tayloristic work model, that training was often built upon the most limited definition of skill. Today, the effective use of advanced manufacturing requires workers with skill and understanding beyond any specific limited area. Now, more generic concepts of entire plant perspective, teamwork, and the development of learning skills (Ashburn, 1986) are the essential skills in fostering the growth and development of both the individual and the organization.

Peter M. Senge (1990) makes the point that companies and all human endeavors are systems, not unlike rainstorms and other natural designs. As a part of the lattice, it is very hard for the individual to see the whole pattern, to see beyond an isolated part or specific task. The workers in this study are pleased with their learning and the use of their own skills. They also like using their training as a source of responsibility and authority and to see their job as a part of a whole. For Senge, "systems thinking" is the integrating skill that fuses other skills together. For many of the trainees, learning was arousing that kind of thinking.

Research Methodology

This paper is based on an ethnographic study of workers who volunteered to participate in a training program at a manufacturing plant in transformation to a high-involvement organization and work cell arrangement. The specific focus is on acquiring an understanding of the learning experience of workers taking part in the organizational change. Data was collected through participant observation at the plant, in-depth interviews, observation of classes and shop floor activities, and from a focus group. For the purpose of this paper, the company that served as the research site for this paper will be called Gansett.

Going From Training to Learning

Often traditional training of equipment operators involved task learning, with no theory or explanation. Training, involving disciplining workers in simple, repetitive tasks, was typical of that done to support a Tayloristic production process. There still is some of this training going on at Gansett and the program being studied has some procedural training in it.

Don Riley, the engineer conducting the program compared his classes, which teach both practice and theory, to the old teaching.

> We had pretty much 'do as I do' type training, with someone who may or may not be qualified to operate the machine correctly, showing another individual, who probably has never seen the machine before, and has no understanding of its workings, how to run it without hurting himself.

However, hands-on training, problem-solving and a variety of operating skills are seen as important by the trainees. Procedural training has become very individualized and specifically problem-oriented within this program. Malcolm S. Knowles (1984) asserts that the best environment for adult learners is a non-authoritarian, less formal, cooperative atmosphere; the instructor's role would be that of facilitator, catalyst and guide, in a process built around what the

learners feel they need to know (Bell, 1989; Knowles, 1984, 1989a, 1989b; Zemke & Zemke, 1988). This would be an apt description of the training program studied.

Practical application was a very important part of the classes even when theory was the topic. The start-up of the cell work organization provided Al, the engineer who introduced the cells to Gansett, and Don, with a chance to offer practical conceptual skill training. They began training on the shop floor:

> We spent almost full-time for three months working with the two operators and really bringing them up to speed. We were teaching what a good drill looks like, why different drill geometries, why you use this end mill as opposed to another end mill, what's a 20% carbide insert. A lot of things were not associated with their job, but we wanted to make these people knowledgeable, as quickly as possible.

The literature raises important questions regarding positive transfer of training to the job. The obvious rationale for worker training is the belief that students will effectively apply the understanding, skills and views from class to the shop floor. However, the degree to which this takes place is often not clear. The degree of learning transferred to the job is said to vary with both training style and the acceptability of the new learning within the company and within the trainee's own department (Baldwin & Ford, 1988). However, it is clear that Don's interactive training style and the workers' acceptance of the new learning generates a high level of transfer.

The Evolving Nature of The Learning

At Gansett learning has been in a process of evolving as shop needs changed and knowledge developed. After three years, Riley sees the program at a crossing point where he must make sure that goals are very clear-cut so that everyone "knows what those goals are and can achieve them." One thing he feels strongly about is that people comprehend that "a better understanding of the world of machining" is not the final goal. "I want successful people."

The evolving nature of training at Gansett and the goal of personal success for the trainees does seem clear. The goals include: Giving the trainees the opportunity to keep learning, improving ability on the shop floor, and one that seems most important, "start using you human resources correctly or lose your skilled work force." Don's idea is that if the workers' skill is not appreciated at Gansett they will have the credentials needed to move on.

At this stage in their personal development, the majority of trainees wanted to keep learning. They have become "adult lifelong learners" with particular interest in what they see as their profession. John Dewey (1916) wrote: "Real education starts after we leave school and there is no reason why it should stop before death." In class, trainees were quick to offer both functional and hypothetical illustrations of the topic at hand. On the shop floor, machine operators were observed reading machine shop manufacturing magazines while "babysitting" their high tech equipment or while on break. During class breaks and on the floor, trainees often wanted to talk about global competition and Japanese human resource use, referring to what they had read or seen on television. Trainees often answered questions on their reasons for volunteering for the classes saying, "You can never learn too much."

A goal of the instructors is to give the trainees confidence on the shop floor. The students revel in that directed confidence. You can see and hear joy in their learning during the class. They like to tell what has been going on the floor and how what they learned works. Matt shared this story with the basic class:

> I'm getting the knowledge that, I don't think there were many people in here who were freely giving. I can give you an example....It helped me a whole heck of a lot. We kept having these cap problems.... Now, Don is telling us that, through studies, it doesn't matter if you've got...80% thread or 60% thread, the

> pull-out power is the same. So as soon as I learned this, I changed all my drill sizes, ...and never had a problem with the caps again. Now we can stop going by trial and error.

Trainees' interest in their own work is advanced by building plenty of practical application into his teaching. Leo was gratified with the progress of his learning and its application. He related:

> If I learn something ... I can understand it. I've picked up a lot from the people I work with. I didn't know much when I got here. [Now I can] communicate better with the engineer, which is very good. You're trained to do everything. ...No matter what's running, you can run it.

An important part of Don's training philosophy is that people from the floor, engineers and production workers should do the training. Moving the training to this milieu advances the evolving nature of learning.

Continuous Learning

Although learning is sought for a variety of reasons, customary judgment is that, for adults, learning is usually not sought as its own reward. Learning is most often a means to an end. Yet, many adults do study for the sake of learning itself (Zemke & Zemke, 1981; Merriam & Caffarella, 1991). Among this group of self-selected trainees, learning for learning's sake and for gaining credentials for financial gain or to help land a new job after being laid off are of about equal weight as reasons for taking part in the training. Lifelong learning, the practice of continuously and purposefully acquiring knowledge formally or informally in order to maintain or improve an employment edge or for personal improvement, became a mode of the Gansett trainees (Schfritz, 1988.)

Sharie, a ninth grade dropout, became bored at home after three children. When she took a job at Gansett, work kindled an interest in learning. She completed her GED and worked her way into the training program:

> ...because you never know too much. It's always good to learn something. I know my job; I know what I'm doing, but you can get stagnant doing things. I always volunteer to learn something new. You never know. It'll always come in handy sometime. Life doesn't end in that department.

Another woman said:

> I think most people realize that you have to repaint and re-look at things because they are done differently today. You have to keep up with it. [This class]...is related to a lot of things I deal with...I help and teach certain aspects of it, which is fun, a lot of fun because you really feel responsible...

There is an element of learning for learning's sake among workers who will take the training and apply the proficiency learned to their job, but resist moving to high-involvement jobs. Matt, a student in the basic class, claimed that he had no interest in going into a cell to work. However, he loved to talk about using the power his new knowledge gave him in his current job. He clearly felt that the class had given him more practical understanding of his work and the ability to take part in decision making.

> Now I just go right up to the methods engineer and say, 'Look I have this problem...and I think...' ...and I'm sure if I point it out to him he's going to say,

'Yeah, you're right.'

The feelings and reasoning of these Gansett trainees exhibit what adult education theory infers. Building or maintaining self-esteem is often a strong motivating factor, along with job advancement. In addition, the application of learning to relevant problems and integration of new and already known ideas are important (Zemke & Zemke, 1981; Merriam & Caffarella, 1991).

When Bud was asked in what way the training had helped him most he said:

> I communicate better with the engineer directly.... You can take an engineer and sit down, understand what he is saying, and the engineer is going to understand what you are trying to get across.

Theory, as well as personal experience, teaches that adults have an aversion to the risk of new behavior before peers. Yet, they openly bring a great deal of experience to class, where sharing it with fellow students greatly advances learning. Social and cultural influences play a crucial role in adult participation and success in formal education such as corporate training (Zemke & Zemke. 1981: Merriam & Caffarella, 1991). These points were obvious from observation of training class interaction at Gansett. Training classes provide a source of social relationships. Sue, coming from a very low-skill job, credited a skilled worker in her department with talking her into volunteering for the program. She had this to say about her fellow students:

> I don't know any of these people here, but they're all...a lot of fun....and they don't knock you down, although I feel stupid if I ask questions...they're always willing to help...explain.

Bo talked about more skilled trainees who brought sample problems to class from the shop floor:

> ...that's good...somebody [with less experience] will ask the question. Any one of us will answer them... I've never seen where somebody's 'I'm better than you. Why should I bother?' Everybody has been very cordial.

Systems Perspective and Benefits to the Organizatior

To think systemically involves the ability to see connections among seemingly unrelated parts. There is also the inherent capability to live with uncertainty and to look for the underlying systemic structure of any given situation. What this means in practice is the realization of a time delay between an action and its consequences, that one needs to understand that immediate closure to a problem may not be as immediate as one would like. This requires patience and the development of understanding.

Whatever their perspective at the start of the program, the Gansett trainees now have a "systems" view of their work and of scholarship.

An engineer studying with the advanced class told this story of Gansett's move to the new training and the importance of a systems perspective on the production line:

> The CNC machine...it's a wonderful tool but you need good operators. They're not just button pushers; they have to be able to diagnose problems...know how to correct a problem and even get in and edit a program...

The wisdom on the shop floor is that the new learning environment has been forced up into the company, forced up by workers who saw a need to learn more about the whole production process. "It came from the floor up, not from the top down." In Don Riley's view:

> The need came from the shop floor, created with the help of the shop floor. I went [to the production workers] to find out just what to teach and where we wanted to go with the training. I got a lot of input from the individuals on the shop floor, who were running the processes at the time.
> They were the ones that badgered the living daylights out of their supervisors.

Other workers illustrate the key characteristics of systemic thinking. Sharie is a coordinator who takes responsibility for much of the production planning in her department. Her systems perspective and interest in benefits to the organization was clear when she talked about hurricane Andrew's effect on the demand for her department's products. Although the coming of Fall usually meant a cutback in hours worked in her department, Sharie convinced the foreman that they should keep production levels up because of rebuilding that would be taking place. She talked of the opportunities from rebuilding, but also of her concern that shoddy construction practices had given fastener systems such as Gansett's a bad name. Sharie said that the company should make sure that building inspectors and building code boards got the right message. This is a systems perspective from a ninth grade dropout, who after three children become weary of household management. She also trains operators on the shop floor. In the training program, she joined in helping build what looked a lot like Peter Senge's "Learning Organization," "...where people continually expand their capacity to create the results they truly believe in" (Senge, 1990a. p. 3).

Bo talked about the fact that production issues had replaced sex and sports as break time topics for trainees:

> ...they're allowed to use their minds a little bit, kicking the cobwebs out....
> ...these guys love this course, jogging and getting their minds active. They say, 'Let me look and see what I'm really doing' versus 'I'll just do it" They've caught a lot of things...that should be straightened out, where, without this course, they would have never.... [Before] it was 'If it works, it works.' Now it's, 'It can be better, why do it this way?'

Trainees are keen on the importance of global competition and the connection between competitiveness and their well being. Although they are suspicious of motives, they do accept the inevitability of change. When Sharie said, "Gansett won't be here twenty years down the line, unless we smarten up," she was expressing a view of reality that trainees feel demands action.

Floyd is a machine operator who has been with Gansett for five years. As he see things:

> The Company is making a major transition. Their ultimate goal is to...compete better with offshore competition. They've been trying to cut and streamline to make it more efficient.

Betty Jane serves in a downsized Quality Assurance Department. She expressed excitement about the changes taking place: "I like what I'm doing! ...building quality into the work" is important for competitive success. "Japan has done this."

Like most of the trainees in the program, she was cognizant of and articulate about changes affecting her:

> Manufacturing is going through another industrial revolution...more of a technological angle... I have to be more versatile. It's necessary to keep your education going ...[it] keeps you up to date, because everything is changing so fast... In today's world, you have to know everything to keep even."

The most positive assertion on the change under way at Gansett was narrated by Gloria. She works in a department transformed to an autonomous work group, independent of the cell program. She talked about her new involvement and its effect on her and Gansett.

> I enjoy being able to have responsibility to make my own decisions. At this time, we're trying to work out problems we have with the first shift because there has to be communication between both shifts to be able to make the whole thing work right.
>
> We make our own hours. We check the production schedules. If, by the end of the week, it seems like we're behind, we can schedule our own overtime... Say we need maintenance, we go right to the maintenance department. The boss actually wants us to make all our own decisions. We make all our own decisions between the group.
>
> It may work out better, in the long run, that way because we know better what we're doing. As far as someone sitting upstairs in an office...things may work out on paper for them, but to be right here, on the floor, may not be the same.
>
> Now, I'm losing money when the machine is shut off so the stressful part of winding wire is gone. [The department is now on salary.]
> ...of course, we have to fix the machines. ...when the machine shuts off, the company is losing money. I have to look at it like that's my job also... If we're not pleasing the customers by getting the orders they want out on time, then these customers aren't going to reorder.

The impetus associated with the Gansett trainees' new skills and learning is self-motivated. Feelings of satisfaction come from their work, but also, from the program. They are pleased with their knowledge and the use of their skills and with working and studying with others who now have similar understanding. They are also pleased to use their training as a source of responsibility and authority and to see their job as a part of Gansett. In talking about learning, they integrate their skills with the change at Gansett and with the change in the global economy. While there is an expected financial component to the seeking of knowledge, they also want to learn for learning's sake.

Conclusions

For the workers in this study learning is an evolving process, as needs change and knowledge matures. Whatever their perceptions at the start, the trainees have adopted a life-long mindset with a systems view of work. The trainees in this study are willing to embrace empowerment, responsibility, and learning. Much of the impetus associated with these workers' new skills and learning is self-motivated, based on their perception of the workplace reality around them. They integrate their learning with the change at work and with the change in the global economy.

The effective use of advanced manufacturing requires workers with skill and also understanding of the more basic competencies and a whole organization perspective. The question of what specific skills workers should learn is becoming less important. Today not only are jobs becoming more complex, but firms want more flexibility and responsibility from workers. Workers must stay abreast of rapidly changing technology and accept greater responsibility; they must also become full members of an evolving learning organization. Organizational learning allows for the growth and enhancement of individual capabilities for the benefit of both the individual and the organization. The key unifying skill of organizational learning, systems thinking, requires the ability to see the overall patterns inherent in any given situation in order that the most effective decision can be made. It is an ever-evolving process. The workers in this study have been very satisfied with their learning and the use of their own skills. There has been a renewed commitment on the part of the workers for continued involvement, growth, and learning--this can only augment the overall effectiveness and viability of the organization.

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Levels of Desired, Actual, and Perceived Control of Employee Involvement in Decision Making: An Empirical Investigation

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Using data obtained from 826 non-managers, this paper explores the effects of age, education and gender on the desired and actual levels of employee involvement in decision-making. Analysis of five decision-making dimensions indicated that though age and education appear to have an effect on desire for employee's involvement in decision-making processes, gender does not appear to be an influence. A discussion of this study's implications for HRD and suggestions for future research is presented.

The topics addressed in employee involvement research are diverse. These include participative decision making (Abdel-Halim, 1983; Alutto & Acito, 1974; Alutto & Belasco, 1972; Bragg & Andrews, 1973; Connor, 1992; Leana, Ahlbrandt, & Murrell, 1992; Locke & Schweiger, 1979; Schweiger & Jago, 1982; Schweiger & Leana, 1986), total quality management in general and quality circles in particular (Barrick & Alexander, 1992; Bruning & Liverpool, 1993; Dean, 1985; Griffin, 1988; Marks, Mirvis, Hackett, & Grady, 1986), participative management (Burgio, Whitman & Reid; 1983), employee participation programs (EPPs), (Castrogiovanni & Macy, 1990; Clegg & Wall, 1984; Cooper, Dyck & Frohlick, 1992; Cotton, Volrath, Froggatt, Lengnick-Hall & Jennings, 1988; Cotton, Volrath, Lengnick-Hall, & Froggatt, 1990; Graham & Verma, 1991), empowerment (Conger & Kanungo, 1988; Parker & Price, 1994), self-managed work teams (Manz, 1992), and autonomous work groups (Pearson, 1992; Wall, Kemp, Jackson, & Cleff, 1986). Because the topics related to employee involvement emerge from various fields of interest and have been under the guise of so many different labels, the research about it is both extensive and somewhat diffuse.

Taken collectively, the available empirical evidence suggests that employee involvement (EI) has moderate effects on employee satisfaction and performance (Alutto & Acito, 1974; Collins, Ross & Ross, 1989; Glew, O'Leary-Kelly, Griffin, & Van Fleet, 1995; Graham & Verma, 1991; Lawler, Mohrman, & Ledford, 1992; Locke & Schweiger, 1979; Miller & Prichard, 1992; Miller & Monge, 1986; Wagner, 1994; Wagner & Gooding, 1987; Yammarino & Naughton, 1992). Perhaps due to the fact that much of the research on EI has focused on these two outcome variables and that the effects of EI on them have been shown to be less than substantial, a call has been made to shift the focus of EI research. It has been argued, for example, that limiting EI research to the examination of satisfaction and performance outcomes reflects unrealistic expectations of EI effects (Ledford & Lawler, 1994). Furthermore, it has been noted recently that numerous aspects of EI have been ignored by researchers and now is the time to begin investigation of these issues (Wagner, 1994). What are some of these other aspects of EI that beg for empirical examination?

Gaps in Employee Involvement Research One issue pertains to the settings in which EI research is conducted. It appears that prior studies have tended to collect data from one or a few organizations at a time. Few have obtained data from many organizations at a time. Second, the data on EI tends to come from managers and HR professionals; relatively few studies have obtained EI data from those who are the "recipients" of the EI process -- the rank-and-file (Glew et al., 1995). Third, the majority of EI research to-date appears to have taken place in large manufacturing companies. Comparatively speaking, little EI research has been conducted in smaller organizations in the service and non-profit sectors.

The second major gap in EI research that has been noted is the kind of data collected from subjects. Many studies have examined personality variables and their relationship to EI and job satisfaction and performance. Glew et al. (1995), and Passmore and Fagans (1992) suggest that more

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attention be devoted to subjects' demographic characteristics, especially as they relate to the willingness or desire to participate in decision making. In addition, they call for more research on individual differences in demographics in response to EI in general as opposed to the more common practice of studying subjects' responses to existing EI programs. "By and large, research on participation has assumed that all employees are willing to participate...despite evidence to the contrary...certainly, individual difference factors may play a role here" (Glew et al., 1995, p. 408).

A third major need in EI research has to do with methodological shortcomings of prior research. Specifically, previous studies have tended to rely on surveys that were too brief to be considered psychometrically sound. While validity and reliability are relative (and not absolute) constructs, utilizing instruments with a handful of items leads one to question the usefulness of the data collected by them. As noted recently by Glew et al., "Some of these measures seem to make rather shallow assessment of participation by using either single or dual item scales...Measurement work should focus on developing methods for assessing individual perceptions of actual and desired participation, as well as related individual difference constructs" (1995, p. 416).

In sum, EI researchers have called for studies which examine factors others than job satisfaction and performance and to explicitly test the underlying assumption of much of this research, which is that employees want to be involved in various work place decisions. Furthermore, studies which collect data from numerous small and medium-sized non-manufacturing organizations at the same time and from the rank-and-file within those organizations has been cited as a need. Lastly, it has been suggested that EI research obtain richer data through the development of more extensive surveys. The present study has attempted to address these needs in a meaningful way.

Research on Desired Versus Actual Levels of Involvement There have been several studies which assessed the difference between the actual and desired levels of involvement based on employee's perceptions. Alutto and Acito (1974) defined this gap in terms of the difference between the number of decisions employees wanted to make and the number they actually made. However, this study appears to have suffered from the methodological shortcoming cited earlier (i.e., survey instrument too brief). More recently, Hatcher, Ross, and Collins (1991) compared desired and actual levels of EI; yet, they collected data from managers rather than the employees themselves.

Two fairly recent studies have appeared to have been responsive to many of the needs for EI research cited earlier. Miller and Prichard (1992) collected data from over 200 rank-and-file employees on actual and desired levels of involvement as well as several demographic factors such as age, level of union activity, and education level. Unfortunately, this study took place in one manufacturing plant and therefore did not examine the gap between desired and actual levels of EI in other settings. In a study by Freeman and Rogers (1994), the difference between actual and desired levels of EI was found to be substantial. They utilized a telephone survey approach with employees in several different organizations, including those outside manufacturing. One possible limitation of this study was that the areas of decision making which were examined seemed to be fairly narrow. That is, employees were asked about only six types of decisions.

The major purpose of this study was to address some of the critical needs expressed by those who have synthesized prior EI research. It attempted to tap the perceptions of large numbers of employees in a variety of organizations, particularly those in non-manufacturing and in those outside the Fortune 1000. Another goal was to expand upon the nature and scope of decisions which had been examined in previous research (see Miller & Prichard, 1992 and Freeman & Rogers, 1994) on the difference between actual and desired levels of involvement. In addition to demographic factors such as age which have been examined in previous research, this large scale research project looked at other demographic factors which have been presumed to be associated with EI but have been subjected to limited empirical testing. These include factors such as type of industry, job tenure, job function and gender. Finally, this study departed from many others in that it elicited employees' perceptions of EI in general as opposed to their reactions to an existing EI program.

To achieve the multiple goals of this study, it was thought that pure randomization of a smaller sample would be less desirable than partial randomization of a larger sample. Therefore, 55 organizations were targeted for the subject pool, based on the lead researcher's contacts. Within each of the 55 organizations, subjects would be randomly chosen to participate.

This was a large-scale study. As such, only a portion of the data is reported here, as much of it remains to be analyzed. The focus of this paper will be an analysis of the effects of age, education and

gender on the desired and actual levels of involvement in and control over decision making. The other demographic factors used in this study will be reported in subsequent documents. Since the research on desired versus actual levels of involvement in many of the types of decisions examined in this study appears to be rather sparse, and since the broad spectrum of organizations from which this study collected data appears to have little precedent, the study reported here is exploratory in nature. Therefore, specific hypotheses were eschewed in favor of this approach.

This study posed the following questions: Which employees really want to be involved? In what kinds of decisions do they want to be involved and to what degree? In which kinds of decisions are they actually involved, and to what degree? And, how much control do they believe they have over their jobs?

Method

Survey Development A survey instrument was developed to measure the levels of employees' desired, actual and perceived control over decision making. The initial step in this process was to uncover instruments used in prior research and to then determine if one or more of them, in whole or part, could be used to achieve the purpose of this study.

Schuler and Kim (1978) developed a survey on employee participation based on expectancy theory (Porter & Lawler, 1968; Vroom, 1964). While this instrument was shown to have positive psychometric properties, it did not address specifically the issue of actual versus desired levels of participation. More recently, a survey created by Graham and Verma (1991) assessed differences between how much say employees should have in various decisions compared with how much say they actually have in them. A similar approach was utilized by Freeman and Rogers (1994). These surveys were based on the assertion forwarded by Rice and his colleagues (Rice, McFarlin, & Bennett, 1989) that the appropriate standard of comparison in such research is how much employees want to be involved in various decisions (as opposed to their expectations regarding the outcome of their involvement in these decisions). The survey used in the present study drew upon these latter two instruments. However, both were somewhat limited in terms of the nature and scope of work place decisions assessed. In order to adequately address the range of issues posed in this study, the kinds of work place decisions were expanded beyond those assessed by both Graham and Verma (1991) and Freeman and Rogers (1994).

The resulting instrument contained 33 questions. For each of 12 areas of decision making (e.g., how work gets done, how fast it gets done, how it is assigned, how co-workers are evaluated, determining training needs), one question asked how often the employee's supervisor asks for their involvement and another asked how often the employee wants to be asked by the supervisor for their involvement.

The instrument was piloted with a group (N=35) of employees. Based on the results, a few of the questions were re-worded to maximize clarity and minimize the possibility of multiple or erroneous interpretations. The average length of time needed to complete the survey was reported to be 8 minutes and 30 seconds.

Survey Respondents A total of 840 non-managers responded to the survey. Their responses were tabulated by a research assistant and cross-checked for accuracy. The responses from 14 subjects were either of questionable validity (e.g., one subject indicated they were both genders) or incomplete. These were dropped from the analysis, resulting in 826 usable surveys.

As mentioned previously, a major goal of the study was to elicit data from non-managers of varying ages, levels of education, amounts of job and organizational tenure, and job functions. In addition, non-management employees who worked outside of manufacturing and in small to medium-sized firms were particularly sought since most of the employee involvement research to-date appears to be have relied upon data from large manufacturing organizations. A total of 55 organizations were represented in the sample. A summary of the respondents' demographics is available upon request. It indicated that the goals for the sample were reasonably met.

In order to facilitate data analyses, groupings within some of the demographic characteristics were collapsed. For example, respondents indicated 16 different industries in which they worked. These were grouped into 3 categories: Service (e.g., health care, financial services), Product (e.g., manufacturing, utility), and Non-Profit Institution (e.g., education, government).

Data Analysis The two-page survey contained 33 questions, of which six were demographic in nature and comprised the independent variables. The remaining 27 questions elicited data on the

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dependent variables: desired ("wants") levels of participation in decision making, actual ("asks") levels of participation in decision making, and levels of employee's perceived control ("control") over his or her job. The dependent variables were rated on a five-point Likert scale ranging from "never" to "always." The types of decisions ranged from the pace of work and problems of quality to personnel decisions and organizational policy issues. For example, question 1 is an "asks" question and reads: "My supervisor/manager asks for my opinion about how the work gets done." A "wants" question (#2) reads: "I want my supervisor/manager to ask for my opinion about how the work gets done."

To determine if gender had an effect on an employee's: (1) perceived control over decision making ("control"); (2) actual level of participation in decision-making ("asks"); or (3) desire to participate in decision making ("wants"), t-tests were conducted. One-way ANOVAs were used to investigate whether the age of employee or level of education had an effect on "asks," "wants," or "control." When significance was found, Tukey Post Hoc Analyses were used to determine which groups had significantly different levels of desired, actual, and perceived control of employee involvement in decision making.

Results

Factor Analysis Of the 24 questions regarding desired and perceived levels of participation in decision making, factor analyses yielded four meaningful dimensions of decision making. They were: (1) "asks1," nine questions referring to how much the employee is asked for opinions/input regarding various non-coworker issues and decisions (Chronbach's alpha = .8799); (2) "asks2," three items about how much the employee is asked for opinions/input regarding his or her coworkers (Chronbach's alpha = .7815); (3) "wants1" referring to nine questions about how much the employee wants to be asked his or her opinion/input about non-coworker issues and decisions (Chronbach's alpha = .9253); and (4) "wants2" representing those three items about how much the employee wants to be asked his or her opinion/input about coworkers (Chronbach's alpha = .8185). The three questions regarding perceived control were grouped together as one dependent variable.

Analysis of Data by Demographics The t-tests revealed that men and women do not differ significantly on all five dimensions of decision making. (See Table 1.) In terms of age, employees between 25 and 48 want to be asked significantly more than those younger than 25 years of age for opinions/input about non-coworker issues [$F_{3,780} = 11.65$, $p<.001$]. Also, employees aged 37 to 48 were significantly more interested in being asked for opinions/input about coworkers than those below 25 years of age [$F_{3,775}=3.08$, $p<.027$]. (See Table 2.)

TABLE 1
Gender

	Group 1 (n=271) Male		Group 2 (n=516) Female		t	p
Subscale	Mean	SD	Mean	SD		
Asks1	2.71	.96	2.67	1.01	.54	.59
Asks2	2.19	.92	2.11	.96	1.16	.25
Wants1	3.57	.81	3.60	.74	-.64	.52
Wants2	2.68	1.19	2.60	1.11	.91	.36
Control	3.62	.95	3.68	.97	-.84	.40

TABLE 2
Age

	Group 1 (n=137) <25 yrs Mean	SD	Group 2 (n=323) 25-36 Mean	SD	Group 3 (n=256) 37-48 Mean	SD	Group 4 (n=81) >48 Mean	SD	F	p	Post-Hoc
Asks1	2.53	1.00	2.78	.96	2.70	1.00	2.58	1.04	2.30	.08	---
Asks2	2.04	.96	2.09	.88	2.25	.99	2.14	1.01	1.99	.11	---
Wants1	3.26	.93	3.67	.69	3.70	.69	3.50	.84	11.65	.00	3,2>1
Wants2	2.43	1.08	2.59	1.14	2.77	1.13	2.71	1.19	3.08	.03	3>1
Cont.	3.47	1.03	3.73	.96	3.69	.93	3.65	.95	2.36	.07	---

The categories for level of education were defined as: 1=high school; 2=some college; 3=bachelor's degree; and 4=post baccalaureate. Employees with higher levels of education (at least a bachelor's degree) want and are asked to take part in decision making about non-coworker issues more than those with less education [ASKS1: $F_{3,747} = 7.2284$, $p < .001$, WANTS1: $F_{3,767} = 18.5268$, $p < .000$]. However, all employees regardless of education level are generally not asked to participate in coworker decisions by their managers. Employees with more education want to be involved in issues regarding coworkers. Likewise, employees with higher levels of education perceived that they had more control over their jobs than other groups [Education x Control: $F_{3,799}=7.3793$, p.<. 001]. (See Table 3.)

TABLE 3
Education

	1 High School n=153 Mean	SD	2 Some College n=259 Mean	SD	3 BA/BS n=262 Mean	SD	4 Higher Degree n=130 Mean	SD	F	P	Post-Hoc
Asks1	2.42	1.01	2.66	.93	2.73	1.00	2.97	.99	7.23	.0001	3,4>1;4>2
Asks2	2.07	1.00	2.09	.86	2.17	.96	2.27	1.00	1.46	.2248	---
Wants1	3.19	.92	3.62	.71	3.69	.65	3.79	.74	18.53	.0000	2,3,4>1
Wants2	2.31	1.13	2.57	1.15	2.80	1.11	2.81	1.07	7.37	.0001	3,4>1
Control	3.43	1.02	3.60	.92	3.71	.95	3.94	.94	7.38	.0001	3>1;4>1,2

Discussion

This section presents the major conclusions drawn from the results of this study, and their implications for HRD and management practice. The limitations of the study and suggestions for further research will be specified.

Conclusions Below is an overview of the major findings and possible explanations for them.

Gender. The results of this study indicate that gender is not a factor in how much employees want to be involved in various work place decisions nor in how much they are asked to be involved in them. The finding that males and females do not differ in terms of how much they wish to be involved in decision making supports previous research (Freeman & Rogers, 1994; Miller & Prichard, 1992). Therefore, the conventional wisdom that females desire more collaborative, inclusive, and participatory decision making strategies whereas men tend to be more comfortable in a traditional, hierarchical, "command and control" environment is suspect.

Age. Unlike gender, age was found to have a significant effect on employees' desire for involvement in decision making processes. Those ages 37-48 wanted the most involvement, not only in decisions which impact them and the organization, but also in decisions about coworkers. Furthermore, employees younger than 25 and older than 48 generally do not want to be involved in decisions as much as those between 25 and 48. Perhaps older employees have become somewhat jaded or skeptical in reference to employee involvement. This study did not explore possible reasons for this finding, but perhaps older employees have witnessed past attempts by the organization to initiate EI and concluded that management's intent was not genuine or that EI was merely a vehicle to add to their workload (Kahnweiler, 1991).

It is important to note that age was not found to be a factor in how much employees were asked to be involved in decision making. In other words, like gender, managers apparently do not discriminate by employee age in terms of how much they ask for employees' input on various decisions. Considerable additional research is needed to ascertain if age is a factor of desired involvement level and, if so, its reasons.

Education. A higher level of education was clearly found to be an indicator of wanting and asking to be involved in decisions about a variety of job, unit, and organization-wide issues. Interestingly, more highly educated employees (i.e., those with college degrees) wanted to be involved in decisions about coworkers significantly more than non-college degreed employees, but were generally not asked to be involved in these issues. At the same time, the college-degreed employees tended to perceive themselves as having significantly more influence over decisions which affect them at work compared to those with less formal schooling.

These findings contrast with those of Freeman and Rogers (1994), who found that education level was not a factor in desired level of involvement. The data also suggest that managers wish to retain control over decisions regarding their subordinates (i.e., employees' coworkers). Despite the fact that college-degreed employees want to be involved in issues such as selection of coworkers, apparently managers do not wish to be responsive to this desire. Aside from decisions pertaining to coworkers, it does appear that managers are willing to involve more highly educated workers in the decision making process. It may be that the more formal education employees have, the more managers trust them and therefore the more they ask for their input on non-coworker issues.

It should also be noted that while employees with more education want and are asked for more involvement on non-coworker decisions, there does appear to be a gap between how much involvement these employees want and how much involvement their managers are asking of them. Thus, while managers seem to involve certain employees more than others in certain types of decisions, from the employees' perspective, they still desire higher levels of involvement on those decisions.

Implications This study explored issues about EI that have previously received relatively little attention, so it seems to have raised more questions than it answered. Nevertheless, two fairly clear implications emerge.

Taken collectively, the results from this study suggest that some employees are not interested in increasing their participation in work place decisions while others have this desire but may not be afforded ample opportunities to be involved. Furthermore, some employees want more involvement in

some types of work place decisions but not others. Clearly, managers and those who assist them (e.g., HRD professionals) need to be attuned to these differences before launching an EI program which embraces a "one size fits all" mentality. Directing employees to be more involved in decision making if they are not interested in involvement seems contradictory and hypocritical at best. Many would consider it unethical to compel anyone to be involved in an EI effort.

The second major implication pertains to the gap between how much involvement employees say they want and how much opportunity they have to exercise it. Even with decisions in which employees wanted more involvement and felt their managers asked them to be involved, there remained a noticeable difference between the desired and actual levels of involvement. One way to narrow this gap, as noted by Freeman and Rogers (1994), is to give employees a say in how EI programs are designed and run.

Limitations While this study attempted to minimize many of the methodological weaknesses attributed to much of the EI research to-date (Glew et al., 1995), it was not without its own shortcomings. Two limitations are particularly worth mentioning here.

First, the data was obtained via self-report measures. Although every assurance was taken to maintain the anonymity of respondents, there was no guarantee that they responded honestly. And like any other study which utilizes self-report measures, this one assessed perceived realities rather than observable, measurable, verifiable behavior. Secondly, although respondents within a given organization were randomly selected, and although the participating organizations represent what appears to be a reasonable cross-section of industries, sectors, and sizes, the participating organizations were not selected randomly. Thus, the results obtained from this investigation should be interpreted and generalized with some caution.

Further Research Because the issue of desired versus actual levels of involvement in decision making has received very little empirical testing, the avenues for future research seem almost limitless. However, several streams of research seem most promising at this point.

One stream would involve testing whether or not the gender mix of the supervisor and employee impacts actual and desired involvement levels. A second effort should be devoted to replicating this study with a stratified random sample of organizations and employees. Third, research which examines desired versus actual involvement levels on decisions examined in this study combined with those assessed by Freeman and Rogers (1994) seems warranted. Finally, it is recommended that a follow-up to the current study be conducted to determine why employees do or do not wish to increase their levels of involvement in various decisions as well as why their managers do or do not wish to encourage more involvement from them.

In conclusion, this study has tested the pervasive assumption underlying much EI research: employees want to be more involved in decision making. It appears that this assumption, like many in general and those regarding EI in particular, is erroneous. It seems clear that those who traditionally have been considered key players in the success or failure of EI initiatives (managers and HR professionals) need to consider the other key stakeholder group (employees) in the process. Specifically, they need to incorporate employees' level of desired involvement in a variety of decisions before launching any formal EI effort. By considering employees' desire to increase or limit their involvement in both the design and implementation of EI efforts, the outcomes of those efforts are more likely to be beneficial for both the organization and those who work in them.

Note: Given space limitations, some tabular depictions of the data and a reference list have been excluded here and are available from the authors upon request. Below are the references most pertinent to this study.

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The Contribution of Self Managing Work Teams to a Learning Organization

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EDON is a company for energy distribution in the north and east of the Netherlands. Subject of the study was the work processes of the fitters and electricians. This is part of a project called 'improving effective and independent working of fitters and electricians'. The study's goal is to improve the work processes of the fitters and electricians and to bring responsibilities to a lower level in the organization.

EDON is one of the largest Energy-Distribution Companies in the Netherlands. It is an organization of 3.500 employees divided among five Regional Energy Companies (REC's). EDON was founded by a fusion of different energy companies. This scaling-up was necessary to join the international energy monopoly-game. The uniting of Europe means that EDON has to complete with foreign energy companies and this will affect their present monopoly position.

The five Regional Energy Companies (REC's) are responsible for the distribution of energy (gas, water, electricity) within their own region. The REC's are involved with the local and regional developments in their own area.

EDON wants to belong the best energy distribution companies in the Netherlands. She wants to be the best in class, quality and services. Therefore, EDON emphasizes reduction of costs, new services and new markets. The effectiveness of the work processes and employees is central to this idea. Enterprise, responsibility, enthusiasm and high quality are the desired characteristics of the employees. At this moment every hierarchical level of EDON is being tested on it's merit. EDON wants to place immediate responsibilities at the lowest levels in the organization.

Four target departments in every Regional Energy Company are involved in the project. In each department there is a severe division between a group of planning engineers and a group of fitters and electricians. Each department has it's own head. Before the scaling-up was realized, every head of department lead up to ten fitters and electricians. After the scaling-up, he had to deal with thirty or forty. At that moment the role of planning-engineer was created. This role is performed by employees who used to be either head of department, fitter or electrician. Fitters and electricians perform the job that is prepared by the planning engineers. In the old situation, the work was planned and divided every day by the head of department. In the new situation, the work is planned and divided once a week by the planning engineer. Fitters and electricians are now to be expected to plan their own work for a whole week independently. This weekly issue of work assumes specific skills by the fitters and electricians to organize their work for a whole week efficiently and independently. Training can be the right solution to support them in their new responsibilities. For this reason the project was started with the following problem formulation: *concerning weekly work issue fitters and electricians have to perform their job independently. Further research is needed to find out how independent fitters and electricians work and which training is required.*

Activities were undertaken to get a more precise formulation and to gather relevant information that could attribute to the solution of the problem. The target of this problem analysis was described as follows: *how effective and independent do fitters and electricians work in the present situation of the five regional energy companies?* and *which problems need to be solved to attribute to the fitter's and electrician's independence and efficiency?*

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Problem Analysis

The problem was analyzed by gathering information on five topics:

1. The internal organization: the mission, target and vision of EDON; the culture and philosophy of the organization; and interference that occur within the organization. Information was gathered by performing a document study and interviews.
2. The external environment: opportunities and threats from the environment to EDON (trends, developments, economy, politics, technologies). Information was gathered by performing a document study.
3. Work processes: the extent of the fitter's and electrician's independence and efficiency was investigated by performing his job. The work processes concerning the fitter and electrician can be divided in three phases: planning the job, performing the Job and after-care (table 1). Information was gathered by performing a written investigation and interviewing by electricians, fitters, heads of departments and planning engineers.
4. Technologies: the influence of present technologies (computers) on efficiency and independence was investigated. The planning engineer uses an information system called PMS (Project Management System). It is used for the planning of the jobs and the logistics of materials used by the electrician and fitter. The information was gathered by making interviews and attend a demonstration of PMS.

Table 1. Three phases in the work processes (Huisman, c.s., 1994)

Phase 1. Preliminary tasks performed by the planning engineers:
The way the planning engineer performs the planning:

- check the situation on the job to determine time, costs, materials and to look for the job that has to be done
- discuss costs and other things with the customer on the job;
- planning of time, materials and capacity; - pre calculation of time, materials and costs;
- gather designs, determine the materials and send letters;

Planning tasks performed by the fitters and electricians:

- gathering designs;
- check the situation on the job (materials, time, etc.)
- make appointments with customers

Phase 11. Performance:

- the possibilities for the electricians and fitters to plan their jobs independently and make decisions;
- visits on the job by the planning engineer or the head of department
- the involvement of the head of the department with the electrician and fitter;
- the number of interruptions during the performance of the job

Phase III. After-care:

- gathering information for the subsequent calculation
- analysis of information
- information on effective performance of fitters and electricians appeal to responsibilities

In this part the results of analysis of the present situation are elaborated

No Mutual Cooperation and Openness. Most planning engineers work for themselves without consult each other. Electricians and fitters notice that planning engineers do not understand each other's work. Electricians and fitters especially take note of the fact that planning engineers are absent (day off or ill). Also, the cooperation between departments can be improved, because of the lack of a good communication and accordance.

Little Involvement and Motivation of the Fitter and Electrician to the Organization. Fitters and electricians are minimally involved with the organization. This influences their motivation. The following causes the minimum involvement and low motivation:

Weekly Work Issue. As a result of this weekly work issue fitters and electricians see each other less. Because they visit the firm less. Fitters and electricians mention the decreasing possibilities for exchanging work experiences.

Coaching on the Job. Coaching on the job by the head of department hardly takes place, because of lack of time. Planning engineers don't have enough time to visit the job, because of increasing administrative tasks. The visits of the planning engineer to the job is vary from 'once in three days' to 'once a month'. Projects and jobs are more frequently planned from drawings behind their desk.

Work Consultation. Work consultation between the head of department and the fitters and electricians can be improved. Most of the time, 'top down-announcements' are made by the head of department. This work consultation can be characterized as one-sided. Fitters and electricians are hardly involved in the consultation.

Involvement of the Head of Department with the Fitters and Electricians. The head of department has little involvement with the fitter and electrician. Though he is hierarchically spoken responsible for personal support to the fitter and electrician, he does not act in this way. He hardly sees them at all. The relationship between the head of department and the fitter and electrician is less strong than the relationship between the planning engineer and the fitter and electrician.

Top-down/organizational changes. Fitter and electricians follow a wait-and-see policy, caused by the organizational changes over the last five years. Fitters and electricians (and planning engineers) expresses that everything is decided at the top without their involvement. Fitters and electricians feel as though they are a number in the organization.

Bureaucracy. The EDON organization can be characterized as being bureaucratic. Planning engineers have to deal with a lot of forms and procedures. At least four hours a day they are occupied with administrative tasks. The planning engineers function is becoming more and more administrative.

No information on effective performance of fitters and electricians. It can be concluded that the head of departments and the planning engineers have little or no information on effective performance of the fitters and electricians. The lack of information is caused by the planning engineers, who make no clear pre and subsequent calculation of spent time, costs of materials of a project or job, and by the fitters and electricians, who hardly ever review the projects or jobs after completion. They are not aware of costs, spent time or used materials. The planning engineers or head of department do not make them aware of these things. Fitters and electricians do not have to answer to their head of department for costs, used materials or spent time.

Restrictions of the fitter's and electrician's independence and efficiency. The preparation and performance of tasks are strictly separated in the present work situation of the fitters and electricians. Usually there is one and sometimes two planning engineer(s) for every three fitter and electrician. Planning engineers tend to plan all projects and jobs to all extremes. Each day is strictly planned. The fitter and electrician need not plan their jobs as appointments with customers have already been made. Moreover they are interrupted in performing their work because of odd-jobs. The fitter and electrician do not have enough influence in the planning process and not enough room to make independent decisions. The fitters and electricians feel strongly restricted in the performance of their jobs by the planning engineers.

Problem Statement

In order to get a clear view of the problem, the problem first was expressed in terms of the present and desired situations.
In table 2 the conclusions about the present situation are summarized and at the same time a desired situation is outlined .

Table 2: Comparison of the present and desired situation of EDON.

Present situation	Desired situation
1. No mutual cooperation and openness; 2. Little involvement and motivation of the fitters and electricians to the organization; 3. Bureaucracy; 4. No information on effective performance of fitters and electricians; 5. Restriction of the fitter's and electrician's independence and efficiency.	1. Mutual cooperation and openness; 2. High involvement and motivation; 3. No bureaucracy, aimed at results; 4. Information available on effective performance so that it can be improved; 5. Fitters and electricians can work independently and efficiently.

The following problem statement was agreed upon:
The present independence and efficiency of the fitters and electricians is strongly restricted. There is no information on their effective performance. The involved departments can be characterized as a bureaucratic with little mutual cooperation and openness. There is little motivation and involvement of the fitter and electrician to the organization.

Task Enrichment

We concluded that there is a severe difference between 'thinking' and 'performing'. The planning-engineer thinks for the fitters and electricians. The latter only perform their job. These severe differences influence their involvement and motivation. Task enrichment attributes to the enhancement of efficiency and independence and the involvement and motivation of the fitter and electrician. Task-enrichment can be described as *'the performance of more tasks, so that the fitters and electricians get more control over their job'*. This means that fitters and electricians should perform more planning tasks and should become more employable. Task enrichment has four great virtues.

Increasing Efficiency and Independence. The fitter or electrician is no longer dependent on the planning engineer. He plans his own work on the job instead of the planning engineer doing this. He gathers the information needed, determines the materials needed, makes appointments with customers etc. He can work independently as he makes his own diagnosis and solves the problem himself.

Less Co-ordination- and Communication Problems. Frequent communication with the planning engineer is not needed. The planning engineer has not enough time to visit the workplace and plan the job. He plans the job behind his desk. In several cases the planned job doesn't fit with the real situation that the fitter and electrician meets. So, the fitter and electrician often have to contact the planning engineer and waste a lot of time before performing their job.

Greater Responsibility and Involvement. As the fitter or electrician plans the job by himself, he will feel more responsible and involved with the job that has to be done. He has to take care that the planning matches with the performance and the calculation afterwards.

Greater Awareness of Costs. As fitters and electricians make a calculation of the costs, they will be more aware of this. The involvement with and responsibility for a good calculation is related to performing the job effectively and efficiently.

Self Managing Work Teams (SMWT)

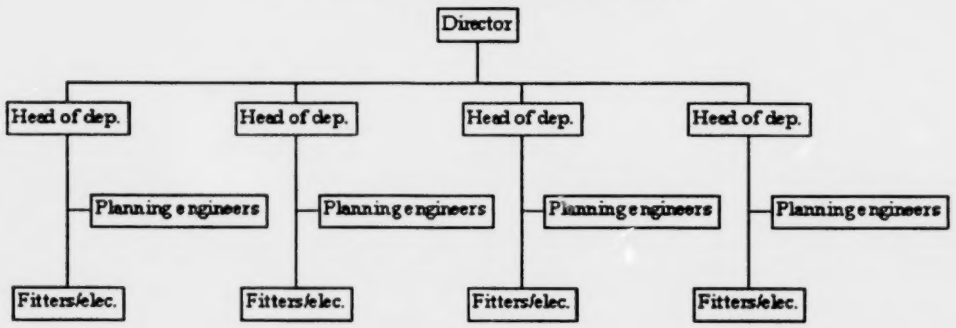
We searched for a better way to organize work and that meets task enrichment for the fitter and electrician. We searched for a work situation in which they are no longer restricted in performing their job. We studied the possibility of Self Managing Work Teams as fitters and electricians can be responsible for the whole work processes in which they are involved.

Self Managing Work Teams can be described as follows (Van Amelsvoort & Scholtes, 1994): *'a fixed group of employees who are responsible for the whole work process in which products or services are realized. The team plans and control the process, solves problems and improves processes and work methods, without constantly appeal to leading service's.* According to Joosse (1990) the following results can be achieved by implementing task groups: shorter delivery time, increasing productivity saving wage expenses, increasing flexibility and decreasing absenteeism caused by illness

Three Proposals for a Better Work Situation

We made three proposals for a better work situation, in which working in SMWT's is taken as a starting point (Huisman c.s., 1995). We defined the SMWT as: 'A *group of employees who are responsible for a self-contained work process. In this work process products and services of EDON will be delivered by self managing activities. It is not constantly necessary to appeal to management or supporting services.* The following characteristic features had been formulated for the self managing work teams: the group will be appealed on responsibilities and performance; the optimal number of persons in the group is 8 - 12; the group will be working together during a longer period (one year); the group will be involved in effectiveness and efficiency. the group formulates group targets. These targets agree to the targets formulated by management. sons to work with self managing work teams are: shorter communication lines; greater flexibility as fitters and electricians perform more tasks; higher involvement and motivation as the group is involved in the whole work process. Another reason is the responsibility for their own performance; an increased productivity because management and responsibility lie within the group;

Figure 1: organization structure proposal I



Proposal 1. The first situation meets closely to the present situation of EDON. The present organizational structure will be maintained. The fitters and electricians work together with the same planning engineer. They form a self managing work team. Depending on the situation, the fitter and electrician perform more or less preparation tasks. The planning engineer performs the same preparation tasks as in the present situation (figure 1).

Changes in behavior will occur when the conditions and tasks of employees are changed. This proposal appeals to a change of attitude. Much depends on the initiatives that the fitter and electrician take. Much depends on the willingness of the planning engineer to create more space

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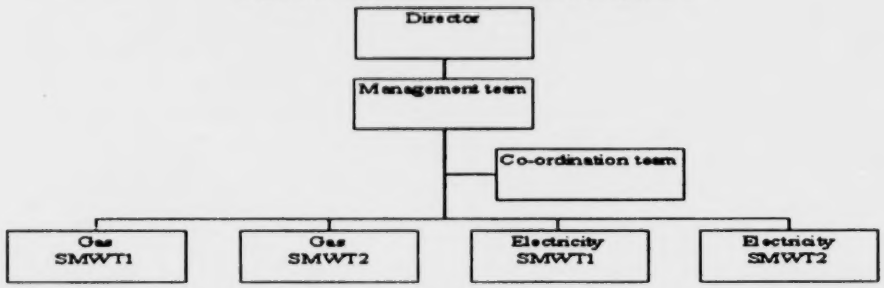
for the fitter and electrician. It is to be expected that nothing will really change. Also, the present number of planning engineers will remain the same. It means that each SMWT consists of 6 persons and that the SMWT will not be flexible enough. It is to be expected that the yields of flexibility, independence and effectiveness will fail to appear.

Proposal 2. All fitters and electricians work together in a SMWT. Besides performing tasks, they will perform a number of preliminary tasks. All planning engineers work together in a coordination team. They will perform a number of preliminary tasks. All chiefs of department work together in one management team (figure 2).

Fitters and electricians perform more preliminary tasks. It is therefore to be expected that fitters and electricians will work more effective, more flexible and independent. The coordinators in the coordination team can perform each others tasks. It is to be expected that this cooperation will also attribute to more flexibility and an effective way of working It is also to be expected that the number of planning engineers and chiefs of department can be reduced.

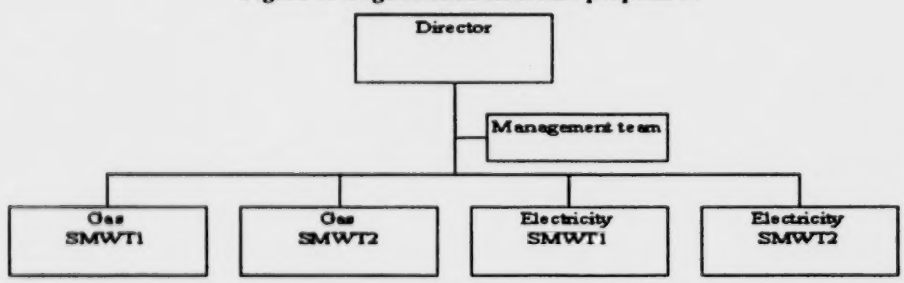
Figure 2: Organization structure proposal 2.



Proposal 3 All fitters and electricians work together in a SMWT. Besides performing tasks they will perform a number of preliminary tasks. One planning engineer is the leader of an SMWT. He performs a number of preliminary tasks. All heads of department work together in the same management team (figure 3).

It is to he expected that the SMWT in this proposal will attribute to the most flexible independent and effective way of working. The SMWT is totally responsible for preparation and preliminary tasks. The SMWT in this proposal is the most flexible and independent one. It has also the shortest communication lines. It is to be expected that the involvement and motivation will be higher than the SMWT in proposal 2. This will lead to greater effectiveness and efficiency. It is also to be expected that the number of planning engineers and heads of department can be reduced.

Figure 3: Organization structure proposal 3.



There is no doubt that proposal 3 has our preference. It is the best suited to meet the targets formulated by EDON. However proposal 3 demands a great change for the employees in performing their tasks and responsibilities. On the one side it can create much uncertainty and

resistance among the employees. On the other side it offers an interesting challenge. Proposal 3 assumes high demands on knowledge, independence and skills. This demands more attention to training consultancy, support and the elimination of resistance among employees.

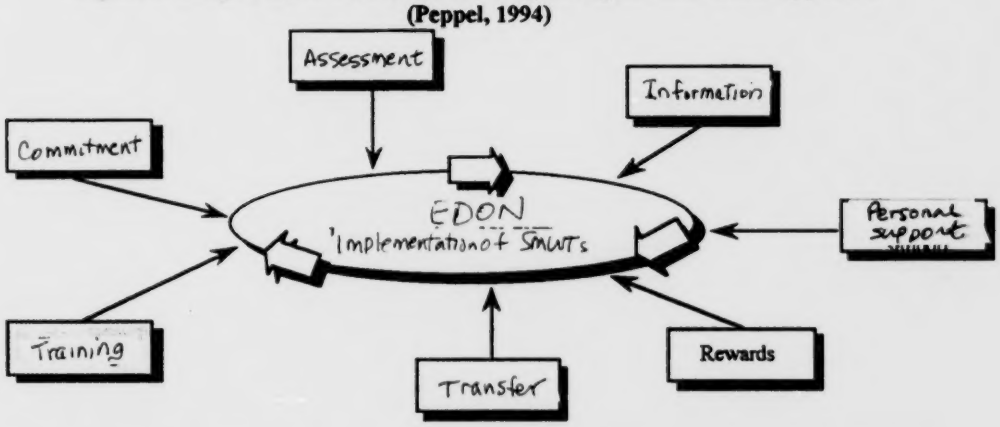
The Implementation of Self Managing Work Teams

The implementation of SMWT's can be seen as a transformation process. A transformation process aimed at transforming the organization into a learning organization. Therefor the behavior and attitude of the EDON employees has to be changed. In a learning organization work and training are strongly related to each other (Van Tellingen & Kense. 1992). Training has to contribute to improving the functioning of the employee on the job. Training is one of the interventions that are needed with organizational changes.

The implementation of SMWT's can he characterized as changing the reality. This reality is influenced by actions or interventions. An intervention can be described as *'Organized activities for the people involved in the implementation of SMWT's. These organized activities fit to the management and the organizational culture of EDON.*

An integral approach of the SMWT-implementation interventions will be most effective. During the process of change different interventions will be used (figure 4).

Figure 4. Integral use of interventions during an organization learning process (Peppel, 1994)



By implementing SMWT's in EDON, the need for training is huge. The members of the SMWT not only will have to learn new skills, but also other ways of working and communicating. The members of the SMWT have to form a team, but it takes time to become a good team. The process team building can be described as improving the individual consciousness and the development of interpersonal skills. It is important to pay attention to the process of team building at the start. The following processes need serious attention:

- handle new tasks and roles within the team
- handle new responsibilities
- handle new communication structures
- handle problems and conflicts

Management team members also need extra training as they have an important role in coaching the SMWT. This role is crucial for the fitter and electrician as they have to deal with a new work situation and new tasks. Task enrichment means adapting to unexpected situations and creating solution to unfamiliar problems. The managers have an important motivational task, they must provide necessary support and are expected to coach the fitter or electrician. . Feedback is an useful instrument and enables the fitter and electrician to correct and change behavior. The coach has a hierarchical relationship

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with the fitter and electrician and must be able to give positive as negative feedback as well. Also, he must be able to deal with personal problems.

A second intervention is developing commitment. At the beginning, during and after the implementation of SMWT's it is important that the change process is supported organization wide. A radical process, as the implementation of SMWT's can never survive on a few people's support alone.

It is important that the employee who is going to perform the job is competent or can be brought up to the desired competency-levels. Weaknesses in a person's functioning can be found by using assessment. Assessment is the process of gathering information in order to measure a person's competencies. Instruments used by assessment are simulations, tests and interviews. HRD plays an important role in increasing the present competency-levels.

EDON has to inform the employees about what is going to change and how this will be done. Information on changes is needed to get management approval for these changes. It is important that management convince her employees of the desirability of change and informs them on the progress. Insufficient information flows cause extra resistance.

Every changing process comes along with uncertainties. Personal disappointments are to be expected. It is important to meet these reactions and to pay attention to personal support during and after the implementation of SMWT's.

The rewarding system has to be motivating for the involved employees. It has to be a clear stimulation to improve and to learn. Rewards should not only be financial but also personal.

Transfer can be described as the extent in which learning results are put into practice after training. In this case that means that planning engineers must let go of present planning tasks must put their coaching skills into practice. While fitters and electricians must perform new planning tasks, must adapt to new situations and must invent practical solutions on the job. All this in less time and leading to better services.

Conclusions

At this moment EDON has to decide whether they take the challenge of implementing Self Managing Work Teams in its organization. SMWT's can attribute to growing to a learning organization, as it invites EDON to discuss existing norms, obstructed organizational opinions, rules and methods. The process of implementing SMWT's provides EDON with the possibility to reflect on daily experiences and improving work processes by those experiences. So EDON can become a learning organization in the nearby future.

The starting point for developing a learning organization is the awareness that an organization has to learn in a continuously changing environment. The implementation of SMWT's enables EDON to anticipate optimal on changes in it's environment and to maintain a best in class position.

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An Analysis of the Instructional Technology Competencies Required by HRD Practitioners and Sources of Competency Development

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The purpose of this study was to describe the computer-based technologies and distance learning systems currently used in employee training and to determine which technologies will be used in future training processes. The competencies needed by trainers to use the various types of technologies were also examined. The study identified where trainers are obtaining competencies in use of computer-based technologies and distance learning systems. The barriers trainers face when implementing new technologies were determined.

Training professionals perform in a great variety of roles as they apply their competencies to the human resource development challenges facing their organizations (McLagan, 1989). Two primary duties of trainers include designing and delivering instruction. Each of these duties is becoming more challenging as technology evolves. The use of technology in training has grown tremendously over the past five years; tools have improved and have produced several changes in the way training is being designed and delivered (Haag, 1993). Contemporary design and delivery systems include computer-based training systems, multimedia systems, electronic performance support systems and telecommunication systems for distance learning. In addition, computer technology is being used to enhance traditional classroom training.

Although not every organization has implemented these new design and delivery systems, the number of organizations using these systems increases each year. A recent survey of organizations with more than 100 employees indicated that 48% are using computer-based training, 27% are using multimedia systems and 43% are using some type of distance learning system to deliver training (Industry Report, 1995).

The use of technology-based delivery systems in the training process has many potential benefits for organizations. For example, the use of computer-based technology in the design and delivery of training can result in greater learning gains, more consistent and acceptable job performance, enhanced cost-effectiveness and greater flexibility regarding the time and locations of training (Hannum, 1990). Several research studies have concluded that, under the right circumstances, computer-based delivery systems are considerably more cost effective than classroom training and produce learning that is at least equal to what can be achieved in a classroom (Haag, 1993). Technology can also help when addressing the needs of geographically-dispersed trainees and in reducing the need for classroom facilities (Perlstein, 1993).

However, the value derived from the use of technology in training is not due to the hardware itself but rather to the instructional processes that technology can support (Hannum, 1990). To be effective in their positions, today's trainers must possess competencies needed to perform in an increasingly technological environment. They must have a solid understanding of learning theories and methodologies and be able to apply this knowledge to the development and delivery of training using computer-based technologies, distance learning systems and other types of instructional technology (Hannum, 1990). Trainers who lack these skills may be limiting their effectiveness and their ability to obtain positions or advance in many areas of the field.

Developing and maintaining expertise in instructional technology can be a challenge to trainers for many reasons. Because instructional technology is an emerging field, many of the

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concepts associated with this field, including "multimedia" or "distance learning," have taken on a wide range of meanings, resulting in confusion for practitioners (Anglin, 1991). Also, because many of these technologies are still evolving, there are few standards in the field. The hardware and software associated with these technologies is continually being changed, upgraded or replaced. It is often difficult for both new and experienced trainers to design, develop and implement hardware and software in a timely manner when the technology environment is dynamic and the rate of obsolescence is increasing (Anglin, 1991). Finally, many trainers who have spent several years using traditional training methods and media may resist or feel uncomfortable with new technology (Schaaf, 1992).

There is a need for a better understanding of the competencies required by trainers regarding the use of new technologies in training and how these competencies may be developed. Although there have been several needs assessments conducted to identify the competencies of trainers, including the American Society for Training and Development's *Models for HRD Practice* and the competency studies published by the International Board of Standards for Training, Performance and Instruction, typically, studies of this type do not provide any detailed information about the competencies needed to use specific types of hardware, software or delivery systems.

Currently, there are several resources that could provide training to trainers who need to develop their knowledge, skills and abilities in designing and delivering instruction using contemporary instructional technology. These resources include undergraduate and graduate courses at colleges and universities; courses, workshops and certificate programs offered by trade schools or technical colleges; and conferences and seminars offered by professional associations (Lindstrom, 1994). Many hardware and software vendors also provide training to organizations that purchase their equipment and products. Finally, trainers can train themselves using training courseware, computer tutorials, videotapes, books and manuals (Lindstrom, 1994). However, because these programs and resources are relatively new, no statistics exist regarding the percentage of trainers who complete formal or self-paced programs or how successful these programs are in meeting the needs of trainers.

In addition, even trainers who are highly skilled in the use of instructional technology may experience difficulty when implementing new types of delivery systems in the work environment. There are often barriers in organizations that inhibit the successful implementation of instructional technology in training. These barriers may include high costs, lack of management support, lack of trainer skills, cultural defaults for the classroom experience and failure to identify needs adequately (Gery, 1994).

Statement of the Problem

Little is known about the nature of the challenges encountered by trainers as they attempt to incorporate computer-based technologies and distance learning systems into their training processes and programs. Few studies have examined the impact of these technologies on the role of the trainer.

Purpose of the Study

The purpose of this study is to provide current information on the implementation of instructional technology in employee training and the competencies needed by trainers to utilize instructional technology in their jobs. This information may be used to assist training professionals in determining their continuing education or training needs in the area of instructional technology. The information also may be used by universities, professional organizations and others who provide degree programs in human resource development or instructional technology in developing relevant curricula.

Research Questions

This study sought to find answers to the following questions:

1. What types of computer-based technologies and distance learning systems are being used to deliver training in business and industry?
2. What types of computer-based technologies and distance learning systems will be used to deliver training in the future?
3. What are the competencies that are needed for trainers to deliver instruction using computer-based technologies and distance learning systems?
4. Where are trainers obtaining the competencies that are needed to deliver instruction using computer-based technologies and distance learning systems?
5. What barriers exist in the workplace that prevent trainers from using computer-based technologies and distance learning systems to deliver training in the workplace?

Significance of the Study

Technology has dramatically changed the way can be which training is designed and delivered. These technological trends necessitate that training professionals learn new job skills (Lindstrom, 1994). This study was designed to benefit training professionals, human resource development managers, academicians and other training providers by providing practical, timely information that may be used to update trainer skills and training programs. This study will provide current information on the implementation of instructional technology in training efforts at a time when it is crucial for trainers to expand their repertoire of skills in this area.

In order to best prepare training professionals with the necessary knowledge, skills and competencies, training providers need to have an accurate picture of the current skill requirements (Morlan & Lu, 1994). The findings of this study may be used by universities and other organizations to develop and revise degree programs, courses, seminars, workshops, and self-study materials to meet the instructional technology training needs of human resource development professionals.

Methodology

This study was conducted during a six-month period from June to December in 1994. First, a literature review focusing on the use of instructional technology in training was conducted. Next, a questionnaire was developed by the researcher and reviewed by a group of eight trainers, research consultants and experts in the field of instructional technology. The first section of the survey was to contain demographic items, including job title of respondent, type of organization and size of organization where the respondent is employed. In the second section, respondents were to identify (a) how technology is currently being used to design and deliver training in their organizations, (b) their perceptions of the types of technology that will be used to design and deliver training in the future, (c) the level of competency required of trainers in each type of technology, and (d) sources of competency development in each technology In the third section of the survey, respondents were asked to identify barriers in the workplace which limited the implementation of instructional technology in training.

Population and Sample. This study was designed to determine the perceptions of training professionals regarding the use of technology in the design and delivery of instruction. The population selected for this study included members of the National Society for Performance and Instruction, specifically those members living and/or working in the following Midwestern states: Illinois, Iowa, Michigan, Minnesota and Wisconsin. This group was selected over the other professional training associations because of its focus on performance technology. The

association's 1993-94 national membership directory was used to obtain a list of members of the population for this study. In this directory, members were listed alphabetically by state. In the five Midwestern states included in the study, there were a total of 1,093 members. A systematic sample of members was selected. This method of sampling is appropriate when a list of elements is available and when the list is arranged in a manner that will not interfere with the purpose of the study (Babbie, 1990). This method also assured that a proportional number of individuals from each of the five states would be included in the sample.

The following steps were taken to determine the size of the sample. First, a decision was made to establish a confidence level of 95% (0.95) for the results of the study. Then the formula outlined in *How to Determine Appropriate Survey Sample Size* (Narins, 1994) was applied to calculate the appropriate sample size for the population. For a population of 1,093, a sample of 381 was required to produce the desired confidence level. This method of determining sample size was generous and provided latitude against typical sources of error including non-response. The first member was chosen at random from the list of members in the designated five-state area. Then every third member was selected until the sample had reached the desired size.

Instrument Development. Given the purpose of the study, the research questions to be answered and the size of the sample, a mail questionnaire appeared to be the most economical and appropriate data collection technique. The instrument was developed through a careful examination of similar studies found in the review of literature. The instrument was designed to collect data as a self-administered questionnaire.

The instrument consisted of an 11 x 17-inch sheet of paper which was printed on both sides and folded into a four-page booklet. The body of the questionnaire was divided into three sections. In the first section, respondents were asked if their current position involved designing, delivering or managing training. At this point, individuals who were not currently working in the field of training and development were instructed to send back the survey without answering the remaining survey items. Respondents who were currently employed in the field were instructed to provide other demographic information, including their job title and the size and type of their organization, and to complete the remaining three pages of the survey.

The second and third pages of the survey contained a grid that listed 32 types of instructional technologies divided into categories. These categories included computer-based training systems, multimedia systems, electronic performance support systems, virtual reality, distance learning systems and computer presentation systems. Additionally, five areas were further divided into subcategories. In each category and subcategory, respondents were asked to identify if they used each technology in their training efforts and if they planned to use each technology in the next three years. They were also provided with an option to list additional technologies which were not included on the questionnaire.

In this same section, respondents were asked to assume that their organization planned to use each technology and to identify the levels of competency that would be needed to implement the technology. The levels included the ability to use or assist trainees in the use of a particular technology, the ability to assess the effectiveness of a technology, the ability to select a technology for an organization and the ability to develop a program or system using the technology. Respondents were allowed to select as many levels as they felt were appropriate.

Respondents were then asked to identify where they obtained or would plan to obtain competency in each technology. A list of training sources, including colleges and universities, technical colleges, seminars and conferences, vendor-sponsored training and self-study methods, was provided.

In the third section, printed on the fourth page of the survey, respondents were asked to identify barriers in the workplace which limited the use of instructional technology in training. In this section, respondents were provided with a list of potential barriers and were asked to indicate if the barriers were present in their work environment. These barriers included insufficient funding; hardware incompatibility; lack of management interest or support; lack of time, knowledge or technical skills among trainers; lack of interest among trainees; inadequate needs assessment; and lack of technical support. Respondents could also identify additional barriers if desired.

A cover letter was developed, printed and mailed with each survey. The cover letter explained the purpose of the study and the format of the questionnaire. It also emphasized the importance of respondent input and provided the name and complete address of the researcher. The cover letter also contained the informed consent information required by the researcher's university.

Data Collection. The 381 questionnaires were mailed with cover letters and postage-paid return envelopes on October 7, 1994. A pencil was included as incentive for individuals to respond to the survey. Seven of the surveys were returned to the sender due to an incorrect or outdated address. These individuals were removed from the sample, reducing the sample size to 374. Thirty percent of the sample, 112 individuals, returned the survey by November 5, 1994. On November 6, 1994, a second mailing, which included the questionnaire, a second cover letter, a postage-paid envelope, and a packet of instant coffee, was mailed to the remainder of the sample. By December 12, 1994, 49% of the sample, 184 individuals, had returned the survey. A phone follow-up was conducted between December 12 and December 16, 1994. An attempt was made to phone every individual who had not returned the survey. During the phone calls, individuals were asked several questions related to the use of instructional technology in training and reminded to send back the original survey.

As a result of the phone interviews, 54 additional people were removed from the sample because they were no longer employed at the organization listed in the directory. Thus, the final sample size was determined to be 320. Following the phone calls, another 15 surveys were returned. The final number of responses was 199, for a response rate of 62%. Of the 199 individuals who returned the survey, 52 individuals indicated that they were not involved in the design or delivery of employee training programs (mostly university faculty members, students and retirees) and did not complete all of the items on the survey. This left a total of 147 completed questionnaires to be analyzed.

Data Analysis. On December 23, 1994, the surveys were delivered to the University of Wisconsin-Stout's Academic Computer Center to be analyzed. The data were tabulated, and the surveys were returned to the researcher on February 3, 1995. In all sections of the survey, each item was analyzed in terms of frequency of each response and overall percentage for each option provided. In addition, Z-tests on the difference of proportions between the "yes" responses of current users and the "yes" responses of those who planned to use each technology were conducted to determine if there were significant differences between current and planned future usage. Chi-square tests were conducted to determine if there were significant differences between the various training sources selected by respondents.

Results

The results of the survey indicated that organizations are currently using a wide range of technologies, and there are 12 technologies that are currently being used by at least 50% of the respondents. These technologies include computer-based training, computer tutorials, computer simulations, computer presentation systems, presentation software, electronic performance support systems, on-line help systems, information databases, multimedia systems, LCD panels, LCD video/data projectors and local area networks.

These were the same technologies that 50% or more of the respondents indicated they plan to use in the next three years. However, respondents indicated that they plan to make significantly greater use of multimedia development and delivery tools including authoring programs, interactive video, CD-ROM, compact disk interactive and digital video interactive. They also indicate that they plan to use more complex technologies for their computer-based training and electronic performance support systems, including hypertext, expert systems, embedded/concurrent training, intelligent tutoring and virtual reality. There will also be greater use of computer conferencing to deliver training over distances.

According to respondents, there will be less use of certain types of distance learning systems, such as audioconferencing and one-way video. This would be logical as technology

continues to evolve and provides more advanced, interactive systems for the delivery of distance education (Gery, 1994). There will also be a decrease in the use of computer presentation systems to deliver classroom training. This decline will occur as companies abandon classroom training for more effective and cost efficient electronic instruction delivered at the desktop (Galagan, 1994).

The levels of competency required to implement instructional technology in training programs were consistent across 27 of the 32 types of technologies included in the study. Overall, respondents reported that the ability to use or assist trainees in the use of the technology was the most highly needed competency. The ability to evaluate the effectiveness of a specific technology was also frequently identified. The ability to develop programs or systems was identified by few respondents as being necessary for most technologies.

Vendor-sponsored training and self-study methods proved to be the most popular choices for developing competency in instructional technology. Attending seminars, conferences or workshops was frequently identified for developing competency in some technologies; however, it was not the primary method for competency development in any specific technology. Significantly fewer individuals indicated that they would attend courses and programs at universities, four-year colleges or technical colleges to develop their skills in any of the areas included in the questionnaire.

The respondents indicated that a lack of time and a lack of financial resources are the major barriers in implementing instructional technology in training efforts, as these barriers were cited by approximately 75% of the respondents. Lack of compatibility between systems, lack of management support, lack of technical support and lack of trainer skills are barriers that were identified by more than 50% of the respondents. These findings were consistent with the literature on this topic, which indicates there are several reasons why technology has not been fully integrated into training programs, including high costs, lack of management support and lack of skills among trainers (Gery, 1994).

Conclusions

From the findings of this study, it can be concluded that the major types of instructional technologies used in training and development will not change dramatically over the next three years. However, there are several newer, more sophisticated technologies that will be used with greater frequency in the future. The respondents' current and planned uses of instructional technology are consistent with other recent studies on this topic that indicate there will be a greater use of interactive technologies that will change how, when, and where trainees learn (American Society for Training and Development, 1994). It is predicted that in the future more companies will utilize digital multimedia technologies and individualized performance support systems to provide flexible training opportunities to workers (Galagan, 1994).

From the survey responses, it can be concluded that it is far more important for trainers to be able to use and evaluate new technologies than to be able to design and develop their own programs or systems. The data from the survey support the concepts found in the literature in this area. Past studies on this topic have concluded that trainers should be familiar with the applications of instructional technology; however, program or system development is generally done by computer programmers or media specialists with expertise in these areas rather than by trainers themselves (Spitzer, 1988).

It was determined by the respondents that vendor-sponsored training and self-study methods are the primary sources of competency development in instructional technology. Seminars, conferences and other training programs sponsored by professional organizations appear to play a lesser role, and universities and technical colleges appear to play a minimal role in providing trainers with knowledge and skills in computer-based training, multimedia systems, EPSS, distance learning systems or computer presentation systems.

Finally, it can be concluded that a lack of time and a lack of financial resources are the major barriers to implementing instructional technology in training efforts. Lack of compatibility

between systems, lack of management support, lack of technical support and lack of trainer skills are also significant barriers. However, there does not appear to be a lack of trainee interest in using instructional technologies or a general lack of support for training efforts.

Recommendations

This study was designed to assist training professionals, human resource development managers, academicians and others who offer training and degree programs by providing information on how instructional technology is currently being used in training and how it may be used in the future. These various groups may find the results of this study useful in future planning efforts.

Recommendations for Practitioners. It is recommended that training professionals and their managers use the data generated by this study in defining current and future training needs and in identifying resources to obtain new skills and competencies in instructional technology. In particular, training professionals should become familiar with the technologies that are currently being used by more than 50% of the respondents' organizations. Training professionals, whether working in small, mid-sized, or large organizations, should also become knowledgeable regarding digital technologies and other emerging technologies that large numbers of organizations plan to use in the future. Skills in using computer systems and electronic support systems have been formally recognized as essential competencies for training professionals (McLagan, 1989). The shift from face-to-face training to delivering information during the performance of work will require all trainers to become familiar with numerous delivery technologies (Galagan, 1994).

The data from this study suggest that training professionals should focus on developing competency in the use and evaluation of the various technologies included in the survey. However, in a small number of organizations, it is also required that trainers select and develop programs and systems. In addition to learning about hardware and software, comments from respondents and the literature indicate that trainers also should possess competencies in using traditional media technologies. Trainers should also understand the process of applying appropriate instructional technology to performance problems (Piskurich, 1993).

Recommendations for Training Providers. The results of this study may also assist faculty in colleges, universities and technical colleges; directors of professional organizations; hardware and software vendors and others who provide courses, programs and training in the field of instructional technology. The majority of respondents in this study preferred vendor-sponsored training and self-study methods to meet their instructional technology training needs. However, several respondents indicated that they and their colleagues have not been trained in many aspects of instructional technology and lack the knowledge or skills necessary to be effective in this area. Therefore, it is recommended that vendors and organizations that provide self-study materials expand their offerings in instructional technology training, particularly in the area of emerging technologies to help address this unmet training need.

Although several post-secondary institutions offer programs in instructional technology, few trainers seem to be taking advantage of these offerings. It is recommended that undergraduate and graduate programs in training and development and instructional technology review their instructional technology courses and competencies in light of the findings of this study to ensure that their courses are relevant and appropriate for training professionals.

Due to inadequate budgets for equipment and laboratories, it is often difficult for colleges and universities to stay current with technology (Lindstrom, 1994). However, if universities and technical colleges are truly interested in meeting the instructional technology training needs of training professionals, it is recommended that they form partnerships with vendors or professional associations to assist in offsetting the costs of providing hardware and software training on college campuses.

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Electronic Performance Support For Telephone Operators

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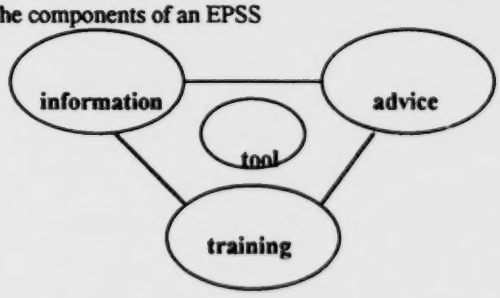
This research is about the effectiveness of Electronic performance support systems (EPSS). Some of the assumptions related to EPSS are evaluated. This paper describes the analysis, construction and evaluation of a performance support system for telephone operators. From the research some conclusions can be drawn that may be important for other projects in the field of Electronic Performance Support.

Since the large scale introduction of computers in the early eighties a lot has changed. In the field of performance technology several electronic support systems are introduced. Nowadays keywords are "just in time training" and "learning by doing". Computer support and electronic job-aids are approximating the master in the master and journeyman relationship used in earlier days. This article is a report of a project in the field of Electronic Performance Support Systems (EPSS). Firstly the focus is on "What is an EPSS?". Secondly the theoretical advantages of EPSS use are stated? At last findings of a research project are discussed. In the project an Electronic Performance Support System for telephone operators is optimised and evaluated.

An EPSS is an integrated computerised environment that supports and occasionally monitors employees while they perform their jobs. In general an EPSS contains the following four components (see figure 1): tools (to perform the job), information (needed to do the job correctly), advice (for the difficult parts of the job) and training (to extend the employees' knowledge and skills). It substitutes for or enhances the support of a master.

Figure 1. The components of an EPSS



In literature several possible advantages of the use of an EPSS are reported. These are assumptions of possible advantages of EPSS use in practice. The first advantage relates to on-the-job training which leads to high transfer, no need to leave the workplace, and more-active learning processes (Bastiaens, 1995). Probably the most important advantage is the immediate access to information, training and advice (Gery 1989, 1991). The just-in-time access to information leads to an extension of the employees' long-term memory and a reduction of the working load memory (Law, 1994). Having continuous access to training means a reduction of formal training in advance of task performance. Because employees can constantly consult the

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advice part of the EPSS the need for supervisor's guidance is expected to be less. This has the additional advantage that the responsibility focus shifts from trainer and training program to the individual's learning needs (Gery, 1991). Moreover, performance support can be important for employees self-management of for the guidance of self-directed teams (Bramer & Senbatta, 1993) and such has the potential to improve the worker's productivity (Raybould, 1990; 1991).

Problem Statement

In the previous section assumptions on the advantage of EPSS have been mentioned but little has been empirically proven. This research project attempts to evaluate the effectiveness of an EPSS. A few disadvantages were found in the literature that could affect the effectiveness of an EPSS. These disadvantages are split in to three categories.

The first category is related to the learning process. "Just-in time" training at the workplace, providing employees with small task-oriented training granules and employees taking control of their own learning process can create problems. Clark (1992) argues that employees may fail to build a unified picture of their job when they have to extract information from an EPSS. Several small information parts will create a fragmented knowledge base. Novices especially need a high level overview of the content to relate details of training. Clark doubts about the learner control in EPSS and she illustrates it with research of Milheim and Martin (1991) which indeed proves that learner control is not as effective as instructional control.

The second category involves problems related to innovation. It is expected that the introduction and implementation of EPSS will summon resistance. Employees are not likely to give up working 'the old way'. Even if they are willing to try a new method there is the problem of pressure in their work. Employees will simply not have the time to engage the training support.

The third category is related to support and work. Is the support adequate? Will "just-in time" support 'de-skill' workers? Will it 'demotivate' workers? Or will it automate the low level tasks and bring in more time to perform tasks on a higher level (Carr, 1992)?
Within the framework of this study it is impossible to give answers to all the questions. The research is therefore restricted to the questions stated in the section 'research questions'.

Research questions

The main purpose of the research is to evaluate the developed support environment and optimise it. The main question is as follows: What is the effect of the existing support environment on the performance and learning of the telephone operators?

Further the following sub-questions are distinguished:
How can an optimisation of the existing support environment further improve the effectiveness of the support environment?

After the optimisation the effects are evaluated on improvement. So the third research question is: "What is the effect of the optimisation on the performance of the telephone operators?"
Regarding the research questions we have the following hypotheses:

Hypothesis related to differences between novice and experienced operators:
There is a difference between novice and experienced operators. Novice operators need more and other information than experts.

Hypothesis related to the support of the information component. It is expected that novice operators will appreciate the information component more, because of a more serious need for information. Lack of information will affect their performance.

Hypothesis three related to the motivation of the operators: Novice operators have a higher motivation but are more insecure about their own performance than experienced operators. For that it is expected that novices have a higher score on innovation willingness.

Hypothesis related to the treatment: It is expected that after the optimisation the new information component is used more often. It is also expected that a new information component will reduce the use of other information sources. At last the assumptions and disadvantages stated in literature are compared with the effects related to learning, innovation, support and work in this research.

The Setting

The research project was executed in co-operation with a large Dutch banking organisation. They only provide banking services and advice by telephone. For that their telephone operators are extensively trained. As far as the training and experience, two types of telephone operators are distinguished. Firstly, experienced operators who have the skills to give advice for all the products the bank has to offer to their clients. Secondly, novice operators starting with just a few products. Novice operators combine training and working and extend their knowledge and skills during a period of six months. After six months training the novices' workers can give advice for all the products.

To give advice and information to clients and also to process their clients' data the telephone operators are supported by a personal computer that is attached to a mainframe. Each operator has a large screen monitor at his or her disposal. On this monitor it is possible to use a tool environment (to process the data) and an information environment (quick access to up-to-date information) simultaneously.

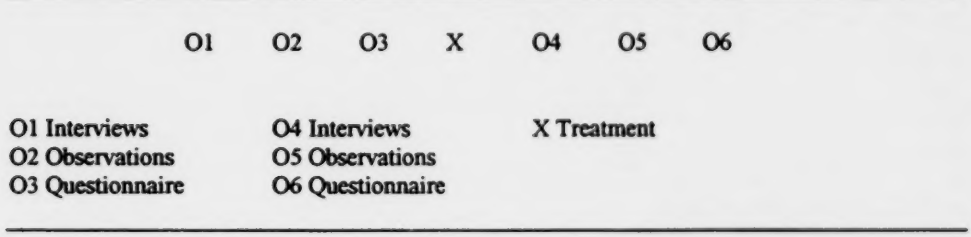
Methodology

To evaluate the support environment the methodology of the one group pre-test post-test design is used (figure 2). This design exists of a pre-test, a treatment and a post-test. For practical reasons it is not possible to use a control group.

The pre-test provides an insight in the information use of experienced and novice operators. To establish an improvement after the treatment a comparison of the results of the pre-test with the results of the post-test are made. For that the post-test is a replica of the pre-test. To improve the reliability of the findings the method of triangulation is used (Patton, 1990).

The population consists of 100 employees of the sales and service department savings-accounts. The variety in working experience, age and educational background is checked and the test groups are checked for homogeneity.

Figure 2: Overview of the methodology.



The Theoretical Construct

Theoretical constructs have been extracted from an identical research project that was carried out earlier (Bastiaens, Nijhof Abma, 1995). The constructs enclose the variables that exert an influence on the EPSS (table 1). Working, treatment and background are general variables. The constructs' tool and information together are the support environment. Next to this, attitude towards work and performance are important, to measure the influence of the context. To get an insight of the knowledge, skills and attitudes learned in the introductory course some variables are identified and taken into consideration. The course may influence the use of the support environment.

From the constructs variables are derived from which items are formulated. These items were used in questionnaires and given to the operators.

Table 1: A list of constructs

Constructs	Variables
Work	
attitude towards work	motivation, self-confidence
performance	independence
Tool	
communication	interface, technical construct, technical realization
help	content, communication
menu	service and advice
Information	
communication	interface, technical construct, technical realization
information	service and advice, usefulness, structure
information (other origin)	information
Course	
preparation on performance	Knowledge, skills, attitude
Background	
Personal	age, sex
Experience	educational background, working and computer
attitude towards innovation	working with new technology

Results on the Pre-test

The pre-test started with semi-structured interviews (n=8). From the interviews the researchers wanted to learn more about the work conditions in the section, working with the tool, the use of information and the use of the information part in the support system. It is not possible to go into detail in this paper so in short; The interviews showed that the operators in general were very satisfied with their job. They liked their jobs and the tool. About the information part in the support system they were not so satisfied. That resulted in a low average use of the information component caused by obsolete detailed information and a dull interface with to many levels in a hierarchical structure. It was easier to consult a colleague or to use your own notes (which were used very often as little job aids).

The second instrument of the pre-test were the observations. In this part an observer sat next to the telephone operator when he/she was working. The most important variables used in this measurement are conversation time, information use and the nature of the conversation

(question, problem, complaint). The independent variables were gender and experience. Exactly 150 conversations were observed. In 40 cases the operator used an information source. Table 2 shows us the nature of the conversations and the use of information. The general conclusion derived from table 2 is that the information component in the support system is not used very often. The operators use more often another source. A closer look at that sources showed that they asked their colleagues for information 8 times, used written sources as folders, brochures, handbooks etc. for 28 times (not in table).

Regarding the first hypothesis which is related to differences between novices and experienced operators the observations showed a difference between novice operators and experienced operators. Not only in the information use, as expected experienced employees do need less information, but also in conversation time, the average time for experienced operators is 2.31 minutes (s.d. 2.07), for novices 3.08 minutes (s.d. 2.40).

The third instrument was the questionnaire. In the questionnaire 24 operators were asked about their motivation, work, tool and information use. First their motivation was looked at.

Our hypothesis that there is a difference in motivation between novice (n1) and experienced operators (n2) is not true (Mann-Whitney test, n1= 8, n2= 15, U= 55.0, p= .78, double tailed). Novices do not have a higher motivation related to the work.

The hypothesis, novices are more insecure than experienced operators who are more satisfied about their performance is not true(Mann-Whitney test, n1= 8, n2 = 15, U= 53.0, p= .34, one tailed) Both types of operators value their performance as high.

The hypothesis that novices score higher on innovation willingness is also not true. Both groups score also the same on innovation willingness (Mann-Whitney test, n1=8, n2= 16, U= 63.5, p= .97). There is no difference in how they look towards new technology.

Important for the optimisation they were asked about the technical realisation of the tool. When the telephone operators were asked their opinion about the tool it showed that that the two groups had the same opinion about the technical realisation (errors in software, waiting time, etc.), the help content (procedural information) and the communication with the help. Table 3 shows the results.

The following results are related to the support of the information component. The operators were asked about the technical realisation, the information accuracy and the use of other information sources. Table 4 shows no significant difference between the two groups.

There was one important difference (not in table 4); experienced operators use the information component more often and for more ends (Mann-Whitney test, n1= 8, n2= 16, U= 26.5, p= .019, double tailed). The hypothesis that novices use the information component more often than experienced operators is not true.

In general the following can be concluded. For most hypotheses the pre-test shows no difference between experienced and novice users. It is a surprise that experienced operators use the information component more and for more ends than a novice All the employees told some interesting information about how to improve the system. A new support system was constructed

Recommendations for the Construction of a New Support System

In general the findings show that the operators are satisfied about the tool. A few administrative improvements are suggested. The real improvement has to be made in the information component. The data shows that experienced users actually do use the information component more often. They use it as a reference book simply because not every detail of a product is remembered. On the other hand novices use other information sources more often, even for factual knowledge (where experienced users use the system). It appears that novices do not know how to use the system because they are confused because of the hierarchical design. For them, it

is hard enough to advise a client and operate the telephone system without using an information system that is not user friendly.

It is also noticed that they need an other sort of information. Not only knowledge of the facts but also instructions about how to do the job. This sort of procedural information was not available in the system yet. It shows that it is also important that users can rely on the information. Information has to be up-to-date and complete. The last important recommendation is that the search and use of the information component has to be an integral part of the overall performance. That means the operators have to integrate the information search as a skill in their performance.

The recommendations require a context- and a task- analysis before a new information component can be constructed. Also some technical conditions have to be taken into account. Figure 2 shows us the schematic design of the traditional information component. Figure 3 shows us the constructed new information system with a maximum of three layers and help questions (Bastiaens, 1994).

Figure 2.

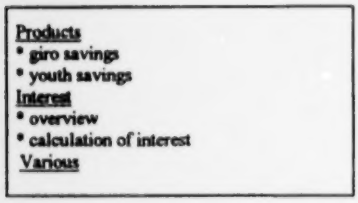
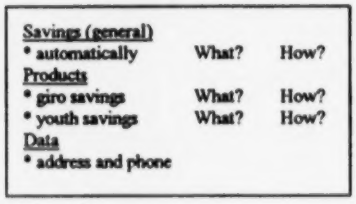


Figure 3.



Results on the Post-test

The post-test consisted of the same instruments and identical variables as were used for the pre-test, so semi-structured interviews (n=8) were used first. As in the pre-test the operators are in general very satisfied with their work. One important aspect they told the researchers the second time was the deficiency of standardisation in the work. Although the system provides standards to process the data, operators want more uniform procedures. The operators are also less positive about the communication process in the division. New rules, products and procedures are not communicated as quick as the should be. About the new information component they are very satisfied. They use the information component because of the new user-friendly structure, the up-to-date information. On the other hand for lack of time on the workplace they want to explore the component off the job. They miss a personal scratch-pad in the system and the possibility to structure the interface themselves.

The next part of the post-test were the observations. Again 150 calls were observed. Table 1 shows the results. It shows that the information system is used 11 times, other information sources 26 times. The total use of information is 37 times. When a closer look is taken at the data it shows that the operators consult colleagues for 9 times and use brochures and handbooks for 16 times (not in table). The observations in the post-test showed us again a difference between novice operators and experienced operators. Not only in the information use, as expected experienced employees do need less information, but also in conversation time, the average time for experienced operators is 2.19 minutes (s.d. 1.48), for novices 2.25 minutes (s.d. 2.19).

The last part of the post-test was a questionnaire. The questionnaire was filled out by 27 operators. Table 2 shows the results of a comparison between experienced en novices. No

significant difference was found when the operators were asked their opinion about the tool again (technical realisation, the content of the help and the communication with the help component).

The result related to the information component show that their opinion about the technical realisation was significantly different. The accuracy of the information in the information component is appreciated more by experienced operators (table 3). The hypothesis related to the support of the information component is not true. It was expected that novice operators would appreciate the information component more, because of a more serious need for information.

In the use of other information sources is no significant difference between the two groups.

Comparison Between Pre-test and Post-test

After the development of a new information component the hypothesis is that the new information component is used more often than in the old situation. That is true. The new information component is used more often (Chi²-test, df= 1, p= .03). Especially novices use the information component more often. Their score on the pre-test was 0, after the treatment on the post-test their score was 7. This is a
significant difference (Chi²-test, df= 1, p= .70).

Table 2. Observed use of information in the pre-test and post-test

nature of conversation	use of information in support system pre-test / post-test	use of other information sources pre-test / post-test	total use of information pre-test / post-test
question	2 (1.3%) / 10 (6.7%)	24 (16%) / 19 (12.7%)	26 (17.3%) / 29 (23.0%)
problem	1 (0.7%) / 0 (0%)	1 (0.7%) / 1 (0.7%)	2 (1.3%) / 1 (0.7%)
complaint	1 (0.7%) / 1 (0.7%)	11 (7.3%) / 6 (4.0%)	12 (8.0%) / 7 (4.7 %)
N total	4 (2.7%) / 11 (7.3%)	36 (24%) / 26(17.3%)	40 (26.7%) / 37 (24.7%)

Table 3. Opinion about the tool component in the pre-test and post-test

	Pre-test n	pre-test U	pre-test p*	Post-test n	post-test U	Post-test p*
technical realisation		42.5	.19		79.5	.58
experienced	8			13		
novices	16			14		
the help content		32.0	.22		53.5	.068
experienced	7			13		
novices	14			14		
communi-cation		46.5	.86		72.0	.38
experienced	7			13		
novices	14			14		

* double tailed

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Table 4. Opinion about the information component in the pre-test and post-test

	pre-test n	pre-test U	pre-test p*	post-test n	post-test U	post-test p*
technical realisation		51.0	.45		68.0	.42
experienced	8			13		
novices	16			13		
accuracy information		44.5	.24		56.0	.15
experienced	8			13		
novices	16			13		
use other information sources		45.0	.26		56.0	.15
experienced	8			13		
novices	16			13		

It is also an expectation that the new information component reduces the search for and use of other information sources. That is not true. In fact especially the consultation of colleagues has grown. Fortunately this is not a significant growth (Chi^2-test, df= 1, p= .06). On the other hand the use of written information sources did significantly drop (Chi^2-test, df= 1, p= .01).

Our hypothesis that the new information component supports the operators better than the old is not true. There is a difference in the meanscores in advantage of the new component but it is not significant (Mann-Whitney test, n1= 24, n2= 26, U= 250.5, p=.12, one tailed). Although the users think that the new support is an improvement this is not seen in the comparison between the pre-test and post-test.

When an evaluation is made on the theoretical assumptions the projects shows that the support environment leads to training on the job. The reduction of formal learning is high. In this organisation formal classroom training is reduced from one month to 6 days. The support environment also leads to a reduction of the working load memory. The assumption of resistance is not observed but it shows that it is hard for the operators to give up working the old way. The automation of tasks and the easy consultation of the support environment lead to an extension of tasks. But the results show that it is 'demotivating' when operators have to wait too long before they can broaden their knowledge about other products.

Conclusions

The results show that the use of the information component at first was very low. From that a lesson can be learned that an information component has to be up-to-date, complete and that the use has to be an integral part of the performance. Our advice was to hire one person to update the information on a daily base. This person does not only put in official information but also collects notes and small job aids which the operators use to develop. Another advice is the integration of the use of the support system in the formal learning process. Teach new employees to work with the support environment. Give them the time to explore the support environment before sending them to work.

Before constructing a support system developers have to keep in mind that the people who use the system are very diverse. These people have their own needs. Give them the ability to

change the interface their way, integrate a notepad and provide different ways to search for information.

Although it is no complete EPSS as is stated in the first section, the researchers think that the developed support system in this situation meets the needs of the company. In their opinion it is not necessary to develop a complete EPSS in every situation. In this research project some advantages of electronic support have been seen but also some serious disadvantanges. Further research in this field has to be done to gather insights not only in the construction of EPSS but more important in the analysis of the organisation, the performance and the workers. However the researchers think that performance support will be the future, it will inform and train employees and help them to do a better job in less time.

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A Goal-Based Scenario as a Unified Approach to Integrated Skills Development Training: Andersen Consulting's BAnDS School

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Andersen Consulting's approach to training and employee skills development within the framework of Goal-based Scenarios is a unique application of GBS training design that integrates skill development across competency areas. Advantages of this approach are reflected through the development of skills among Change Management, Process, and Technology competencies, building understanding of value added by other competency areas, and enhancing the ability to work in cross-competency teams.

The need for an integrated approach to building consultant skills covering multiple competency areas lead to Andersen's pursuit of a unique approach to the application of GBS techniques. Consultants with 30-36 months experience with the firm were chosen from the Change Management, Process, and Technology competencies to foster understanding and appreciation of the requirements of and the value added by the other competency areas.

Andersen Consulting's business integration competency practices - Technology, Process, Change Management, and Strategic Services - anchor the organization as a market leader amid a sea of competition. In combination with in-depth industry knowledge, these competencies ensure that value is delivered to clients through the Business Integration (BI) model.

Each competency is a unique collection of skills, methodologies, knowledge capital, and experience that in combination can achieve an outcome valued by a client. Within the competency practices are 50 specific BI competencies that are central to Andersen Consulting's long-term competitive success.

Competencies are what Andersen Consulting does; service offerings are what Andersen Consulting's clients and the marketplace buy. Service offerings, such as Systems Integration, Business Process Management, and Enterprise Transformation, are comprised of a set of competencies that deliver significant business outcomes. Clients want solutions; service offerings provide them.

Andersen Consulting's competencies are the key differentiator, separating the organization from its competitors. These competencies are at the heart of the organization's marketplace success and underpin its vision of one global organization. The roles of consultants, and the skills required from them, have changed dramatically over the years.

In order to maintain Andersen's lead position in an extremely competitive industry, and to accommodate the rapid pace of changing customer requirements, Andersen Consulting has focused on a unique training process to bring all the myriad combinations of competency experts together.

As the table below shows, the role of just one level of Andersen's consultants has changed immensely over a short period of time.

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Engagement Characteristic	1985	1995
Engagement Length	2 years	5 years
Number of people	25	200
Number of Releases	1	Several
Software	Either Custom or Package	Custom and Package
Management	Project Management	Program Management
Architecture	Occasionally Custom	Usually Custom
Business Process	Discuss Process Implications of System	Business Process Re-engineering
Success	Conversion on Time and Budget	Delivering Business Benefits Realization
Platform	Mainframe	Client/Server

Andersen Consulting

Andersen Consulting (AC) is a global management and technology consulting organization whose mission is to help it's clients change to be more successful. Our mission is simple, yet far-reaching: change can encompass anything from the operational streamlining to enterprise transformation. Regardless of the scope of change, we help our clients achieve success. As part of Arthur Andersen's worldwide organization, Andersen Consulting has more than 32,000 people in 152 offices and 47 countries.

Many of our competitors focus on providing niche services such as offering strategic advice or building computer systems to support the business. Andersen Consulting is different; it is a global, full service provider of business integration services. We can provide multiple benefits for our clients depending on their needs. When our clients want to invest in information technology or change their strategy and operations, we can help them do that - among many other things. We don't just give advice; we assemble engagement teams that work with our clients to implement and sustain solutions to their needs.

AC encompasses four competency areas (Change Management, Process, Strategy, and Technology) that are used in the engagement teams in combination to provide an integrated business solution to client problems. Rather than addressing a single aspect of a problem, AC finds workable solutions to complex problems as a whole, and supports the solutions into the future. This is what we call "Business Integration", or "BI".

With a centralized training facility that can comfortably house nearly 1800 participants a day, AC has the most comprehensive skills building capabilities in the business world. Located in St. Charles, a suburb of Chicago, IL, the Education Center is visited by consultants from around the world each week.

Andersen Consulting Education (ACE) is a small group of training and instructional design professionals that produce the schools that consultants participate in year-round. Composed of just over two hundred people, ACE produces the vast majority of training presented at the Education Center in St. Charles. The training produced ranges in delivery method from computer-based self-study courses using leading edge technology to traditional instructor-led schools encompassing case activities that simulate true-to-life scenarios.

ACE has four internal areas:

- Development is comprised of instructional designers who are responsible for designing and developing high-quality, cost effective training products.
- Delivery Management personnel are responsible for delivering centralized training and ensure that each session runs smoothly by procuring and coordinating participant attendance, faculty, technical support, materials, rooms, and equipment.

- Management Support is responsible for the support and resources necessary to enable Development and delivery areas to function effectively.
- The Advanced Development Group id charged with creating consistent technology architectures for the development of technology-based education products, particularly with multi-media.

Goal-based Scenarios (GBS)

A GBS is a relatively new approach to training and education that tries to enhance what is learned by making the learning process more directly applicable to the learner. In Goal-Based Scenarios, participants are placed in a simulated situation and given a series of goals to solve. The participants learn by "doing" rather than having to assimilate what they are hearing and try to find a way to assimilate the information in ways that are applicable to their experience. GBS's are a drastic departure from the traditional lecture-based training that has pervaded the training industry for decades.

According to Roger Schank of Northwestern University, attributed as the developer of the original GBS concept, a GBS is...

> "a type of learn-by-doing task with very specific constraints on the selection of material to be taught, the goals the [participant] will pursue, the environment in which the [participant] will work, the tasks the [participant] will perform, and the resources that are made available".

A GBS involves the learning of skills; in this case meaning something that one knows how to "do". Some terms commonly associated with a GBS are: skill, case, fact, domain, and process. As an example, Schank describes the "Broadcast News" program that High Schools have applied to introduce students to the skills necessary to produce their own news show. The students work with newswire text and video news footage to learn how to put together their own show. The end product of the GBS is a videotape of a newscast that the student put together.

When one learns something by doing it rather than hearing or reading about it, the information tends to get assimilated much more thoroughly. Skills are learned within the context of direct application and impact to the learner, rather than as an abstract concept.

Just a few years ago, the vast majority of the training developed for AC personnel was of the traditional "talking head" variety; a lecture-style format that was intended to impart information verbally to a mass audience. With the advent of GBS, this format has been replaced by the students in many ways teaching themselves as participants while involved in the process of solving specific problems and pursuing defined goals.

AC's approach to using the GBS concept uses a "case" company scenario to build the learning environment around. For example, the BAnDS school simulation focuses on the "B&B Beverages" case company, which is an Australian beer brewing company in need of modernization in their production, sales, and delivery support systems and organization.

What was the purpose of the BAnDS school?

Simply put, the purpose of the Business Analysis and Design School (BAnDS) school, and what made it so unique, was the combination of building consultant skills through the use of a GBS and the ability to integrate multiple competency areas to build those skills in one school. Consultants with 30-36 months experience with the firm were taken from the Change Management, Process, and Technology competencies to build understanding of the value added by members of the other competency areas during a Business Integration engagement.

The BAnDS school objectives involved:

- The development of skills among competencies (*Change Management* - organization development & cultural analysis, *Process* - business process redesign & workflow development, and *Technology* - application development).
- Approaching Business Integration more directly in training by building understanding of value added by the other competency areas.
- Enhance the ability to work in cross-competency teams within the Client Engagement Framework.

The impact of the BAnDS school on its participants, based on the key focus areas, can be attributed mainly to its leading edge learning environment, which dramatically shifts the attitude of consultants coming to the AC training facility in St. Charles, Illinois. The participants walk away with skills that can be applied immediately to the engagements that they are currently involved with, and therefore their clients receive the value added by this training immediately.

When considering the BAnDS school in relation to the Business Integration model described previously, we must realize that BAnDS was the first BI school of its kind for the experience level of the participants. Each of three major competency areas were represented on each team, encouraging cross-competency communications and fostering understanding of the value that each competency area brings to the firm.

The school was designed to provide the participants with an understanding of:

- How BI is changing the way Andersen Consulting's people work together.
- How our clients perceive Andersen Consulting.
- Reactions to working with other competencies.
- The value of having firm experts share their client success stories.
- Learning to leverage the firm's rich knowledge base, including the Knowledge Xchange, ENACTS, and "war stories" from peers on their own client engagements.
- Increasing the skills base in the competency areas and how that is evidenced by the increased success on client engagements and higher performance levels.

How was BAnDS built and used?

The development of the school was based around the approach to learning called Goal-Based Scenarios that we discussed earlier. BAnDS was designed to be a 5 day school and consists of 2 primary "modules"; Business Process Redesign (BPR) & Design.

The BPR module lasts 2 days. Participants work in cross-competency teams of twelve members to re-engineer 3 separate Business Processes that are critical to our case client's success (Manage Customer Relationships, Produce, and Fulfill Orders). Each twelve member team is further divided into three cross-competency subteams, each one focusing on one of the three business processes. The three subteams must work with each other, as well as the client, to analyze the current business processes, identify requirements and redesign the business processes of their assigned areas. Near the end of the first two day module, the subteams need to come together to develop an integrated business solution.

The Design module lasts 3 days. Participants evaluate the same case in greater detail, under the pretense of "time has passed", shifting from a common focus to a more competency-specific focus. Each twelve person team then divides into the three competency groups used for this engagement.

The Change Management Team faces the task of redesigning the organizational structure and jobs of the company's sales organization. The Process Team is charged with the design and tailoring of a packaged application solution that addresses the company's systems needs for one of the business processes (Fulfill Order). The Technology Team needs to design a laptop custom

systems' solution automating the salesperson's job requirements. As you can see, each task takes some requirements from the design of the other teams solutions, therefore communication and cooperation is of paramount importance throughout the process. This understanding of the value of communication and cooperation from the perspective of successful experience are aspects of the GBS method that are extremely valuable to the participant, but virtually impossible to teach by lecture.

At the end of the second three day module the teams need to come together to design an integrated release strategy for managing the rollout of the substantial changes to our client's organization. As with the first module, participants are tasked with determining how to communicate with and develop a partnering relationship with a client.

The case materials are based upon a wide range of inputs from several Best Practices engagements. Best Practices is a tool that allows lessons learned from each engagement to be shared electronically by any and all consultants. It is a way to ensure that the good techniques continue to be used as widely as possible. The case materials provide the participants with inputs, examples, and best practices that are rich with information, issues, complications, techniques, challenges, and opportunities, in order to most accurately simulate the conditions under which a true engagement takes place.

The school contracts external (non-AC personnel) managers to assume various B&B client roles. The intent is to provide participants with real-life client personnel to increase the authenticity of the school. These "clients" used in the school react in much the same way as Andersen's clients, because they are, in fact, have experience with the industry used in the school.

During the school AC Associate Partners, Managers, and Seniors will provide participants with coaching and support. Throughout the school, the participants are provided with feedback from both the clients and the coaches through formalized checkpoints and informal meetings. Another invaluable source of feedback and information comes from a participant's peers at times throughout the school as well.

Through the entire school, a technology tool, a program called Integrated Performance Support for Learning (IPSL), with access to Firm experts and the knowledge databases is available throughout the school. The IPSL acts as a process guide and resource that provides information access that is tailored to a participant's current needs in the school. The information that is available through the IPSL is the same information available to the consultant in the field, thereby reinforcing the value of the use of the Knowledge Xchange, ENACTS database, and other provided tools.

Evaluation

The success of the BAnDS school can be seen in the results from participant surveys and follow-up responses. The method of evaluating the effectiveness of the BAnDS school, and subsequently the GBS format itself, revolves around gathering participant assessment responses. This information is gathered several times; once within the structure of the school itself, and later at 3 month, 9 month, and 18 month intervals.

The feedback gathered during the school itself involves pre- and post-participation surveys. Prior to beginning the school, each participant is asked to complete a form that allows them to rate their knowledge/effectiveness in specific areas of interest that will be addressed by the school. For instance, one item that they rate themselves on is "Identify potential Business Integration implications/barriers to change (people, process, technology)". Considering their own capabilities in reference to this statement, they can rank their personal perception of their effectiveness in this area on the following scale.

No Ability	Low Ability	Some Ability	Job-Ready Ability	Advanced Ability
No understanding of, or ability to apply competency	Understanding, but little ability to apply competency	Some ability to apply competency, but not confident to apply on the job	Able to confidently apply competency on the job	Mastery-level ability--able to coach others on competency

Upon concluding the school, each participant is again asked to rate themselves in each category. These results indicate that the average participant goes from "No Ability" to the "Job Ready" category in cross-competency capabilities. As follow-up surveys of the participants of the first two BAnDS schools show, consultants working on BI engagements for diverse clients around the world credit a portion of their success to having attended the BAnDS school. The responses to the prior and post school surveys indicate a dramatic improvement in the participant's perceived ability to perform the tasks rated.

The school is too new for results to be gathered on the 9 month and 18 month evaluation cycles. The results of the 3 month evaluation, however, are highly favorable and show that, while some skills can be lost when they are not needed in the field, the attitudinal gains made by the participants are still as valuable as they were immediately after the school was attended.

The evaluation for the 3 month review was structured as a survey that was electronically sent via email to the participants of the school. The topics on the survey included multiple questions intended to cover major categories such as Business Integration, Firmwide Knowledge capital, Client Business Objectives, Customer Application Development, and others. The questions were worded to gauge agreement with a given statement.

In addition to the ranking responses, the participants were given the opportunity to respond to a number of questions in writing. These questions ranged from inquiring about their perception of the effectiveness of the faculty and "clients" to asking about their habits in using the tools that they were, in many cases, introduced to for the first time while acting as participants in the BAnDS school. The Knowledge Xchange is another electronic tool that Andersen uses to share information about engagements and solutions that have been used to solve client's problems that may be useful to others.

Some examples of the questions used:

- "During BAnDS you worked with members of other competency groups. How are you continuing to learn about the capabilities provided by other competency groups?"
- "Considering your Business Integration experience in BAnDS, what is your perception of how BI will impact the long-term success of the Firm?"
- "How do you now use the Knowledge Xchange (including the ENACTS database) and Firmwide experts as resources for delivering client value?"
- "What experience in BAnDS have you found most useful as you work towards understanding client's business objectives for an engagement?"

Responses to these questions are captured and used to evaluate the success, and degree, of the original objectives of the school itself as well as how much value the participants find in having had the BAnDS school experience in their future engagements.

A comparison of the data from prior to participation in the BAnDS school to the recent responses to the electronic survey indicate the continued growth of the participants and their enhanced success in engagements requiring multiple competencies. The responses in each case are based on a five point scale, from zero to four. For instance, the growth experienced by the participants in the September conduct of the BAnDS school is shown in the following table.

By Competency	Before	After	Growth
Overall	2.44	3.51	0.82
Change Management	2.58	3.52	0.94
Process Management	2.56	3.68	0.65
Technology	2.29	3.52	1.02

This data reflects averages of the responses provided by participants prior to the school and after follow-up surveys have been returned and calculated. The data above is based on responses reflecting the completion of the BPR module of the school. The table, based on the previously mentioned scale of zero to four, shows that the overall improvement has been substantial over the months since the school.

The same data gathered to reflect the second module of the school broken down by the competency area that the participants took part in shows comparable improvement.

By Role in BAnDS	Before	After	Growth
Overall	2.41	3.49	1.08
Organization Design	2.47	3.24	0.77
Conference Room Pilot	2.24	3.64	1.40
Custom Architecture	2.51	3.59	1.08

The increased growth, on the average, that is reflected in these responses is, we feel, indicative of an enhanced awareness of the need for cross-competency communication, and an increased appreciation of the value provided by the members of the other competencies on an engagement.

Conclusions

To remain a viable and relevant resource, Andersen Consulting Education initiated a process of re-engineering the training strategy of the firm. The ACE mission is to enable Andersen Consulting people to excel through education. The training and education that we produce must enable our people to identify their own performance needs, acquire training and information on a timely basis and convert their learning to a business solution.

The re-engineered Andersen Consulting Education strategy accommodates the advancements taking place in educational approaches, technology and processes. The use of these advancements is essential to fulfill the changing demands of the practice in the most timely and cost-effective manner possible.

Several guiding principles have been identified for redesigning training programs to align more with the firm's strategy:

- Increased emphasis on developing specialists, rather than generalists
- A new instructional approach, focusing on skills acquisition rather than knowledge acquisition
- Increased emphasis on a business integration perspective
- Strengthened core competency alignment

These guiding principles, together with the Andersen Consulting Education mission and vision, give the background for the Technology-enabled Performance Enhancement School design and development projects like BAnDS. Through the use of GBS training techniques, Andersen Consulting's professionals are equipped to maintain the cutting edge in their abilities and to continue leading the industry in providing value to our customers.

Job Instruction Reconsidered: Usefulness and Limitations of the Dominant Type of Structured OJT

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In recent publications the importance of on-the-job training for modern companies is recognized, and proposals are offered for structuring this type of training, in order to make it more effective. In recent literature, the dominant approach to structuring on-the-job learning is the 'experienced-colleague-as-an-instructor' or, more briefly, the 'Job Instruction' model. In this paper the organizational and educational premisses of this dominant model are being scrutinized.

Although in the twentieth century school-based general and vocational education has gained importance in preparing young people for the world of work, the magnitude and importance of on-the-job training have not diminished. Some authors claim learning on the job to be impractical because of the opacity of the work process and because of the risks involved, and un-educative because of the firm-specificity and therefore non-transferability of the learning results. According to Van Onna (1992) recent (computer) technological developments in trade and industry make on the job learning both more possible and more indispensable. Whether this learning has to take place in the traditional pattern of Job Instruction, is a matter of doubt.

Job Instruction

Let us start with a little history. Job Instruction has its origins in the first an second World War. In the first World War C.R. (Skipper) Allen was charged by the Emergency Fleet Corporation of the U.S. Shipping Board to train 450.000 new employees for the shipbuilding industry in next to no time. On the basis of Herbart's instruction theory he developed a four-step method: preparation (show), presentation (tell), application (do), inspection (check). The training was carried out by the direct supervisors, after receiving a train-the-trainer course. The training was to be based on a precise task analysis. In the second World War the American training experts of the military training-consultancy group 'Training Within Industry Service' met comparable challenges. They were, for example, confronted with a gigantic lack of skilled opticians for the manufacturing of optical precision instruments. The usual training for a fully qualified optician took five years. That time was not available. The solution was found by dividing the job of the optician into several isolated operations and by training employees to carry out only one of these operations each. The duration of the training per person was thus reduced to several weeks. For this kind of so-called Job Instruction, a slightly adjusted four-step method was developed, which was passed on to groups of 10 prospective instructors in an elementary course taking five two-hour sessions (the so-called Job Instructor Training). The instructors learned to analyze a task by different steps and to determine "key points" (for instance concerning safety). Furthermore they learned the four steps of instruction: 1. Prepare the worker, 2. Present the operation (per step and while paying attention to the "key points"), 3. Try out performance (during which the learner is asked to explain the "key points") and 4. Follow up. Thanks to this format, in less than four years (1941-1945) more than a million on-the-job instructors could be trained (Training Within Industry Services 1945, p. 126). Maybe because of the rise of the human relations paradigm in training, Job Instruction received little attention in literature on training and development after the fifties. Recently there seems to be a revival of interest in the topic of on-the-job training. There is a general recognition that training should be closely connected to the actual work performance. A milestone is the book 'Structured On-the-Job Training', by Jacobs and Jones (1995).

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Jacobs' and Jones' structured OJT can be considered a variant of Job Instruction as developed by Allen and the TWI Service. It too starts with a task analysis. It lists five training events: 1. Prepare the trainee, 2. Present the Training, 3. Require a response, 4. Provide feedback, and 5. Evaluate Performance. Comparison of those events with the four steps of Job Instruction shows just a minor deviation. An interesting contribution of Jacobs and Jones is their distinction (inspired by Swanson and Law, 1993) between three types of structured OJT, with varying sub-steps per event: structured OJT for managerial training, structured OJT for technical training, and structured OJT for awareness training. As an illustration, the sub-steps for the events 'Present the training' and 'Require a response' within the managerial training format are presented below (Jacobs and Jones, 1995, p. 111):

2. Present the training
   a. Position the trainee.
   b. Present an overview of the model or process.
   c. Present examples of the model or process in use.
   d. Explain the parts of the model or process.
   e. Demonstrate techniques applying the model or process.
   f. Summarize the entire task.

3. Require a response
   a. Ask the trainee to explain purpose and rationale.
   b. Ask the trainee to describe the model or process.
   c. Ask the trainee for examples of the model or process in use.
   d. Ask the trainee to explain the parts of the model or process.
   e. Ask the trainee to demonstrate techniques.
   f. Ask the trainee to summarize the task.

Job Instruction, as worked out by Allen, the TWI group, Jacobs and Jones, and others (Connor, 1983, Broadwell, 1986, Rothwell and Kazanas, 1990), with varying labels (Planned On-the-Job Training, Structured On-the-Job Training), can be considered an instructional strategy for on-the-job training. It is based upon two suppositions:

1. in order to have employees realize adequate job (task) performance, supervisors should have a detailed analysis of job (task) procedures at their disposal.
2. in order to have employees realize adequate job (task) performance, supervisors should use a direct instruction model.

Under what preconditions are those suppositions true?

Do We Need Task Analysis?

Should tasks be analyzed before an employee can successfully learn to perform that task? The answer depends upon the nature of the job and upon the organizational paradigm one adheres to.

Jobs, and the organizations in which they are embedded, differ in important aspects. McKenna and Wright (1992, p. 902) warn against the 'organizational tunnel vision'. According to them industrial and organizational psychologists have 'failed to consider seriously the possibility that not all organizations are the same, that there may be fundamentally different organizational types, species, or configurations that affect and are affected by individual behavior in different ways'. And: 'Perhaps the most elegant and comprehensive taxonomy of organizational species is that of Mintzberg' (McKenna and Wright, 1992, p. 992). Turning to the writings of Mintzberg (1979), we can learn that in some work organizations the planning of tasks is clearly separated from their performance. A preparatory staff or the supervisor does the planning, figuring out what is the best procedure for performing the task. This procedure is prescribed to the employees responsible for task performance. This is the coordination mechanism of machine bureaucracy: standardizing the work process. This is the type of organization that depends heavily on task analysis. In other types of organizations (or in other types of jobs or tasks), the work process may show more variation. Either the supervisor coordinates the task performance, thus eliminating the need for employee training as is the case in the simple structure

(coordination mechanism of direct supervision) or the employee does the planning himself, taking the ever varying task specifics into account as is the case in the professional bureaucracy or in the adhocracy (coordination mechanisms: standardizing of qualifications or mutual adjustment). In the latter cases maybe a task analysis of the general planning process can be established, but most of the expertise required for adequate task performance cannot be recorded in the form of operations and key points.

But not just the type of task, job, or organization determines the answer to the question whether job analysis is needed. Also one's organization theoretical paradigm influences the answer (see McKenna and Wright, 1992). If one embraces the machine metaphor, task analysis is a natural thing to do for supervisors. If one accepts, for example, the brain metaphor, it might be more adequate to focus on creating self-directed work teams, and stimulating self-organization as an alternative to procedural prescription. Recently, the brain metaphor has gained influence in literature. Attempts to create learning organizations have important consequences for the role of the supervisor. Mink, Owen and Mink (1993, cited in Zuber and Miller, 1995) describe a role shift from a prescription model to an empowerment model of coaching. In the prescription model the supervisor/coach gives goals, defines roles, writes procedures, controls behavior, evaluates performance, directs, and relies on extrinsic motivation. In the empowerment model the supervisor/coach develops consensus about goals, lets roles evolve, lets procedures evolve, emphasizes quality as a way of life, focuses on ways to improve processes, collaborates, and increases initiative and internal motivation.

It is evident that Job Instruction fits in a control oriented approach to organization design. Whether such an approach is adequate in a specific situation can only be decided by analyzing that situation, diagnosing the need for a uniform work procedure. The brain metaphorical hype might blind us for the possibility that such a need is quite common and legitimate. Another consideration that might be relevant in this context is that training a supervisor to perform task analyses might be considered an empowerment of the supervisor, enabling local teams to change procedures adaptively. Research on variants of Job Instruction has more than once lead to the observation that the involvement in task analysis is a very illuminating process for supervisors and experienced workers and may lead to important improvements in the work process (De Jong, 1993, De Jong and Versloot, 1994). Thus, quite unexpectedly, efforts within the context of the prescriptive model may lead to results, pursued in the empowerment model.

So do we need task analysis? The answer is: yes, but a. restrict it to tasks or task elements that benefit from standardizing and b. involve the work team in the analysis and, continual, development of work procedures.

Do We Need Direct Instruction?

The second characteristic of Job Instruction is the use of a direct instruction procedure for teaching the work procedures. The term direct instruction is a modern name for a procedure used for skill training, which has proven to be successful in primary schools, for example for learning to read (Rosenshine and Stevens, 1984). It is characterized by a dominant role of the teacher, who in a rather formal manner tells and models the skills to be learned, then guides the pupils in practicing the skills, providing corrective feedback, and finally has them practice more independently. In history several procedures have been developed for skill training, but they differ just in details. The essence has been described by Anderson (1980) in his three phase model. In the first phase (the cognitive phase), a declarative knowledge base is formed, comprising information relevant to task performance. In the second phase (the associative phase), the information in the knowledge base is transformed into procedural representations: successive actions that have to be performed are demonstrated and practiced. In the third phase (the autonomous phase), performance is accelerated and automatized. Instructor activities are presenting information, demonstrating, eliciting performance, providing feedback, and coaching. Those are exactly the activities expected of the on-the-job trainer in the Job Instruction model.

Do employees need direct instruction in order to successfully master new tasks? The answer depends upon the nature of the learning objective and upon the learning paradigm one adheres to.

Clearly, if the learning objective happens to be skill attainment, the direct instruction model is

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an obvious candidate. Interestingly, Jacobs and Jones tune their Structured On-the-Job Training model to awareness training and management training, where performance does not involve hands-on activity, but forms of symbolic activity: describing models and processes, and providing examples. Apparently, Jacobs and Jones consider the direct instruction model an appropriate choice for both skills and knowledge. Are they right? For which learning objectives is direct instruction the appropriate choice, and for which learning objectives should another choice be made? An author who has dealt with this question is Romiszowski (1981). He claims there are essentially two general modes of learning: reception learning and discovery learning, corresponding with two general instructional strategies: expositive strategies and experiential strategies. What I called direct instruction is clearly an example of the expositive strategy. Romiszowski further claims there are two classes of learning objectives, both divided in subclasses: 1. knowledge, divided in facts, concepts, principles, and procedures, and 2. skills, divided in reproductive and productive skills. Reproductive skills consist mainly of the execution of procedures, whereas productive skills ask for the use of strategies, which should be adapted to the specific action context. Romiszowski provides several heuristics for allotting instructional strategies to types of learning objectives. For the learning of principles, for example, experiential strategies should be preferred, whereas in the case of procedures (especially when not clearly based upon a principle), an expositive strategy is more adequate. In the case of skill learning, reproductive skills ask for a different approach from productive skills. Reproductive skills ask for an expositive strategy, whereas productive skills ask for a specific combination of experiential strategies and expositive strategies (at first discovery learning for learning the principles, next reception learning while the strategy is demonstrated and practiced, and finally discovery learning while exploring new applications). It may be concluded that the direct instruction model, as a specimen of the expositive instructional strategy may be better suited for some learning objectives (facts, reproductive skills) than for others (principles and productive kills). So it is important to analyze the competencies to be trained in order to provide for the right support of the learning process.

But not just the type of competence to be mastered determines the answer to the question whether direct instruction is needed. Also one's learning theoretical paradigm influences the answer. Recently, constructivism is presenting itself as an alternative to the more traditional 'objectivistic' paradigm of learning (see f.e. Duffy and Jonassen, 1991). Objectivist theorists are portrayed as believers in objective knowledge, which is transmitted through education or through direct contact with the world. The learner's role in the learning process is relatively passive: learning is the gradual strengthening of associations between cognitive elements as a result of cumulating experience. Constructivist theorists are portrayed as believers in subjective, personal or culturally bound knowledge, which is actively constructed by the learner in attempts to make sense of experience. Whereas objectivists try to shape the learner's knowledge by presenting elements in an orderly fashion, and providing specific feedback, constructivists rely on inducing the learner in a task environment where he or she has to experiment and interact in order to construct a satisfying mode of dealing with the task. According to Cobb (1994) and Phillips (1995), two subtypes of the constructivistic paradigm can be found: one stressing the sociopolitical nature of knowledge construction, and the other stressing the individual creation of knowledge. The three paradigms thus conceived closely resemble the three paradigms of knowledge and instruction, sketched by Farnham-Diggory (1994): the behavior model, the development model and the apprenticeship model. The behavior model (which corresponds to the objectivistic paradigm) conceptualizes learning as an incrementation process: 'accumulating something, getting better, getting faster, getting more, and so forth' (Farnham-Diggory, 1994, p. 464). The developmental model (which corresponds to individual constructivism) conceptualizes learning as a qualitative shift in personal theories and explanations as the result of experienced anomalies. The apprenticeship model (which corresponds to social constructivism) conceptualizes learning as acculturation into the world of the expert (whose knowledge is often tacit and situational), as a result of participation in that world. It is surprising that the three prototypes of on-the-job training, as described by De Jong (1991) - on-site instruction, on-site study, and on-site practice - mirror these three paradigms on learning.

It is clear that the direct instruction approach of Job Instruction fits best within an objectivistic, behavioral paradigm. This does not imply, however, that the constructivist paradigm precludes teaching by transmission: 'On an alternative reading the constructivist maxim about learning can be

taken to imply that students construct their ways of knowing in even the most authoritarian of instructional situations . . . ' (Cobb (1994, p. 4). Cobb even calls 'the very notion of a constructivist pedagogy or of constructivist teaching a misnomer that reflects a category error'. Constructivism should be viewed as a perspective from which one can perceive otherwise overlooked aspects of learning. The recent constructivistic revival may draw our attention to the personal and cultural knowledge construction processes at the workplace, the often implicit and situational nature of that knowledge, and the need to link up instruction with those processes. Job Instruction thus can be viewed as a combination of tools to be used in the construction of shared knowledge of the work process. The supervisor is one of the actors in this process, besides the experienced and new workers and outside providers of knowledge. Whether that knowledge should be transferred by the supervisor or by experienced colleagues, via oral or written instruction, in a formal way or in the process of working, or maybe collected by the learner himself, is dependent upon the nature of the knowledge, upon the culture, upon the preknowledge of the learner etcetera. The important thing is that effective cycles of social and individual knowledge construction are kept turning, aimed at continued improvement of work quality and worker qualification.

The question was: do we need direct instruction? The answer is: maybe. But what we do need anyhow is to find ways to improve employee expertise, based upon a continued search for better insights, strategies and procedures related to the mission of the organization. Direct instruction is one of those ways, especially useful for reproductive skill training and the transfer of outlined insights and models.

The Future of On-the-Job Training

Our inquiry has yielded a broader perspective on issues of on-the job learning and on-the job training. The first element of that broader perspective is the recognition of different coordination mechanisms for securing good performance. Before choosing a strategy for structuring on-the-job learning, one should be clear on the division of responsibilities for the quality of work output, work procedures, work processes and trouble shooting, and the maintenance of worker qualifications. Different answers on these questions lead to the choice of different strategies for structuring on-the-job learning, as Versloot and De Jong (1994) have elaborated. Some of these strategies ask for task analyses by supervisors or performance experts; others ask for systems for exchanging insights and experiences within the organization; still others ask for exchange of insights and experiences of professionals working in different organizations.

The second element of the broader perspective is the recognition of the roles of the individual employee and the work team in the learning process. The instructor role of the supervisor or the experienced colleague should be supplemented with active inquiry by the employee and the sharing of situated and tacit knowledge by the work team members.

Both elements point to the need for a more comprehensive view on knowledge management in organizations. Developments in the field make this need pressing. The competencies to be learned for the modern workplace are often more complex than the routines learned in the traditional Job Instruction programs. They involve higher levels of cognitive processing that should be practiced in authentic complex environments. Also, in the modern workplace, work and learning get intertwined. According to Van Onna (1992, p. 130), 'in the case of sophisticated technologies, the products are usually not fully developed, tested, and adapted to the wishes of the users upon delivery', so 'the workers who will have to operate the new technology should change with it, so that they learn to discover new possibilities for applying and shaping that technology'. Other authors as well spot the convergence of the realm of learning and the realm of work. Forrester, Payne, and Ward (1995, p. 303) cite Gelpi (1986, p. 233): 'Education is becoming a part of the social and productive process and not . . . only an initiation to work. The productive process is changing permanently and this means a need for flexibility, mobility, innovations, and psychological equilibrium to deal positively with these changes; this means also permanent creativity in education, not only to pick up skills, but to understand the complex nature of the emerging productive process and its relationship to the working and non-working environment. This creativity is reserved not only for the top managers, it has to become the patrimony of the entire workforce of the productive structure'. This is why the study of

different phenotypes of on-the-job training has substantial relevance for both educational institutions and organizations in commerce and industry.

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Structured On-the-Job Training Competencies

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A survey of U.S. line experts and training professionals, with response rates of 59% and 57%, identified competencies needed by both groups in supporting structured on-the-job training. Training professionals identified 13 highly important competencies, primarily in the "analyze" and "develop" steps, with none in "evaluate." Line experts identified 21, primarily in the "deliver" step, with almost none in the other steps. Gaps between desired and current levels of expertise were also identified.

There is an ancient proverb: Knowledge is a treasure, but practice is the key to it. On-the-job training (OJT) has a long history of use because of its potential for high transferability compared with other training methods; an identical or similar setting exists between work and training. Malcolm (1992), stating the results of a Honeywell study, found that "about 80 percent of all critical job skills [of managers] are acquired...on the job" (p. 58). OJT has been recognized as the most common form of training in business and industry (Lewick-Wallace & Jask, 1988). Carnevale and Gainer (1989) viewed on-the-job training as "the principal means by which technical, economic, strategic, and regulatory changes are gradually integrated into the workplace" (p. 15).

In spite of its pervasive use and criticality, there are serious concerns about OJT. Learning by doing is often hit-or-miss training with no guarantee of what tasks a worker will learn (Connor, 1983). OJT has been regarded as cheap and easy to implement without planning (Goldstein, 1993). This kind of training may, however, waste work resources. To counter this concern, DeJong & Versloot (1994), Jacobs (1992a), and Rothwell and Kazanas (1990a & 1990b) emphasized the importance of structuring OJT, thus differentiating it from unstructured OJT, which is "haphazard, incomplete, and too disruptive in the workplace..." (Jacobs, 1992a, p. 500).

Definitions of SOJT

The importance of structuring or organizing OJT has been emphasized for many decades (Engel, 1958; Goldstein, 1993; Nadler, 1979). Engel (1958), cited by Kruger (1985), defined OJT as

> systematic learning through the actual performance of an occupation in the environment in which the job will be performed....a process of accomplishing the steps in the written training program, over a period of time, together with an evaluation of accomplishments and progress at noted intervals. (p. 11)

Jacobs has also made an effort to identify SOJT's boundaries. His definitions of SOJT have changed during the last few years: "the one-to-one process of providing the knowledge and skills to perform a specific task within a job" (1992a, p. 500); "the planned process of transferring expertise from experts to novices in the work setting" (1992b, p. 2); "the planned process of developing task-level expertise by having an experienced employee train a novice employee at or near the actual work setting" (Jacobs & Jones, 1995).

"One-to-one process" in the first definition implies that trainee numbers should be limited to less than four in most cases (Jacobs, 1992a) because OJT includes close observation and guided

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practice. But Sullivan and Miklas' (1985) case study of successful OJT showed that interaction is needed among all trainees and other staff involved for an OJT program to be successful; the type and extent needed depends on the task and duration of the training. Both Rothwell (1991) and Senge (1990) have pointed to the importance of team learning; thus, a whole work-unit may have to pursue OJT, especially when the tasks require interaction among the unit members.

In the second definition, the notion that expertise on a task is transferred from experts to novices may not be appropriate considering adult learning theories. Often expertise in adult learning is self-generated by learners themselves with facilitation from others who may be instructors. Trainees are not necessarily novices, especially when the training is designed to obtain context knowledge rather than subject matter expertise, for example, a newly hired school bus driver may have been a commercial bus driver. What he or she needs is to become familiar with geographical features on the bus route and the characteristics of his or her passengers--the students. Adult learners should be analyzed to determine their expertise obtained through previous experiences before attempts are made to train them.

SOJT does not have to be restricted to task-level expertise as stated in the third definition. In Sullivan and Miklas' (1985) study, the OJT content was the bank assistant-manager's job intertwined with many individual tasks. Except for simple and repeated tasks, it is more important to understand how to relate individual tasks to each other in a project or job than to develop individual task expertise. Jacobs (1992a) himself recognized that "some observers view the 'project' as the most appropriate unit of work analysis, as opposed to the task, which they believe does not represent the expectations of today's work-place" (p. 511).

> Considering the above concerns, the present authors have defined SOJT as:
> Planned training to develop workers' level of procedural and contextual knowledge and skills required in performing specific tasks/projects, primarily through observation and practice on or near the job site, guided by an experienced line worker who has the necessary instructional competencies.

As with other formal training methods, SOJT should be planned with the involvement of top management, line managers, and the training coordinator to promote the effectiveness and efficiency of the program (Sullivan & Miklas, 1985). Top management involvement includes establishing an organizational policy that guarantees ongoing company-wide support (i.e., rewarding employees, relieving workload for OJT practice, and so on).

There is a Korean maxim which emphasizes the effectiveness of observation in learning: Hearing one hundred times is not as good as observing one time. But an OJT trainer must be aware that his or her behaviors may be automated and so fast that the trainee cannot follow them. The behaviors may not be able to be done without expertise obtained over a long time with repeated performance. The OJT trainer should know the key portions of learning theories and learner-centered instruction. In the guided practice stage, OJT instructors should also supervise the trainees' performance for the safety of people and equipment.

The concept of procedural knowledge is based on Anderson's (1985) cognitive model. Anderson divided knowledge into two levels: (a) declarative knowledge about facts and things, and (b) procedural knowledge about how to do something. For example, declarative knowledge about my car includes certain facts (there is a gear stick, brakes, and an accelerator) and descriptions (e.g., how to change speed). The procedural knowledge includes actually being able to change the speed, not just describing how it is done. Anderson (1987) was interested in developing procedural knowledge from declarative knowledge, while producing fast, accurate, and flexible routines of high performance.

Besides these cognitive abilities, psychomotor skill is also needed in performing tasks. Declarative knowledge and psychomotor skills are primarily developed through off-job training and/or self-directed training. Procedural knowledge connects the declarative knowledge to the behaviors according to the context cues in the work setting; thus, OJT is needed to develop procedural knowledge.

Mangum (1985) compared the pros and cons of OJT and Off-JT according to the situation, demand, and constraints. This may be like comparing bread and butter, both of which have different functions and different dimensions and characteristics. OJT and Off-JT should be

integrated to compensate for their weaknesses and to complement each other. Without obtaining declarative knowledge through Off-JT, OJT cannot be effective because trainees do not know what to do. Without OJT, the content knowledge cannot be applied well on the job. For example, Rackham (1979) reported a case of sales training in which 35 salespersons' performance was not improved after conventional classroom teaching. The problem was solved with a program designed to provide branch managers with methods for analyzing selling skills and systemically training their salespeople on the job.

Steps in Conducting SOJT

Engel (1958), Gold (1981), and Stokes (1966), reviewed by Kruger (1985), emphasized the importance of structuring OJT for efficient processes and effective results. Kruger (1985) summarized the steps and the specific actions required within each step. The OJT phases include: prior to instruction, instruction, presentation, application, and follow-up. Jacobs and Jones (1995) provided an OJT process model: decide whether to use SOJT; analyze the tasks to be learned; select, train, and manage the trainers; prepare training modules; deliver the SOJT; and evaluate and troubleshoot the SOJT. These models include similar steps even though they used different terminology.

The above models show the sequential procedure, from selecting OJT as the training method to follow-up steps. Jacobs and Jones' (1995) OJT process model is a single loop. But the procedure does not have to be sequential. When the same or a similar program has been implemented before, the analysis step can be skipped or simply adjusted. Based on formative evaluation, the order of steps can be switched or the same step repeated.

The present authors used a traditional systemic instructional model consisting of six stages: analyze, design, develop, plan for implementation, deliver, and evaluate. The personnel involved in each sub-step are included. Line experts are employees who have sufficient knowledge and skills to perform a specific job anywhere in the organization. (See Table 1.)

Some authors (Kruger, 1985; Marquardt, 1976) have pointed to a major problem in many informal OJT efforts: line experts, who are often charged with implementing OJT, are not prepared in instructional knowledge and skills. One possible response to this problem is to encourage subject matter experts who are responsible for OJT to take a train-the-trainer program specifically designed for OJT (Jacobs & Jones, 1995). Such a program would be strengthened if competencies needed by line experts for structured on-the-job training (SOJT) were identified, along with those competencies needed by human resource development professionals to support line experts who are doing SOJT. This model (Table 1) was used in the study reported here to identify instructional competencies needed for performing each step, as well as to assess the gap between current expertise and desired expertise on the part of line experts and training staff professionals.

Methodology

Surveys were used to gather the data for this study. This section will describe the population and how the sample was selected; the procedure used to conduct the survey; and how the data were analyzed.

Population and Subjects To identify SOJT competencies, the target populations were training professionals and line workers who had conducted SOJT. To identify a sample, a pre-survey was used. First, the national directories of the two major training-related professional organizations were used to select 200 training professionals at random--American Society for Training and Development (ASTD) (150) and the then-named National Society for Performance and Instruction (NSPI) (50). A cover letter was sent in August, 1994, describing the purpose of the study and our definition of SOJT. A form was also enclosed for respondents to provide the

Table 1
SOJT Steps and Personnel Involved

Step	Personnel
1. Analyze	
Specify organization goals	MN*
Determine training climate	TP**
Analyze the target tasks/task cluster and required knowledge, skills, and attitude for the performance	TP, LE***
Analyze trainee knowledge/skill levels, learning characteristics, and personality	TP, LE
Present training needs and goals to management for approval	TP, LE, MN
2. Design	
Set objectives	TP
Determine sub-steps of delivery (explain, show, part/whole practice)	TP, LE
Determine delivery media (job guide, CBT, video, one-to-one, etc.)	TP, LE
Determine evaluation methods (written test, performance check list, on-the-job performance)	TP, LE
3. Develop	
Develop learning materials	TP, (LE)
Develop evaluation tools	TP, (LE)
Obtain feedback and revise	TP, LE
Pilot test and modify	TP, LE
4. Prepare for Delivery	
Check the operation schedule	LE
Plan training schedule (number of trainees, number of trainers and staff personnel, tasks, condition, time, and equipment)	TP, LE
Set the criteria to select trainers, staff, and trainers	TP, LE
Select candidates for OJT instructors, supporting staff, and trainees	TP, LE
Provide train-the-trainer programs for line experts	TP, LE
Arrange the workload of trainers, supporting staff, personnel, and trainees	MN
Provide appropriate social and physical support	TP, LE, MN
5. Deliver	
Place tools and learning materials at training site	TP, LE
Place trainees	TP, LE
Prepare learning place	LE
Deliver training according to design by explaining, showing, guiding practice from whole to part to whole	LE
Monitor the training process	TP, MN
Coach on dissatisfied parts of the trainees' performance	LE
6. Evaluate	
Evaluate the trainees' performance as planned	LE
Evaluate the trainers' instructional performance	TP,(MN)
Evaluate training materials	TP, LE
Evaluate training process	TP, LE
Document training record	TP, LE
Evaluate on the job after training (one week, one month, six months...)	LE, MN, TP
7. Follow-up	
Coach as needed	LE

Return to necessary earlier steps	LE, TP
Recognize trainees' completion of OJT (managers' congratulation, certification, promotion, or pay raise)	MN, TP, LE

*MN: management, **TP: training professional, ***LE: line experts

names and addresses of training practitioners and line workers who had instructional experience in offering SOJT. A response rate of 10% was obtained in this first pre-survey round. From among the non-respondents, 20 were selected at random and in a telephone interview were asked if they had instructed or coordinated SOJT. Sixteen answered that they did not have SOJT instruction experience, and two could not be reached. If this is representative of the other non-respondents (a reasonable assumption), then the 10% response rate provides reasonable assurance that the responses adequately represent the population with such experience. With this experience, two additional samples of 100 each, selected at random from the ASTD directory, as the NSPI directory had provided a much lower response rate, followed in November and December, 1994.

From these three pre-survey samples, 97 training practitioners and 43 line workers with the desired SOJT experience were identified. Personal contacts yielded 28 additional names and addresses, providing a total sample of 111 training professionals and 57 line workers, all of whom were sent the survey instrument. The response rate (with 5 and 3 undeliverable surveys, respectively) was 56.6% of training professionals (n=60) and 59.3% of line workers (n=32).

Instrument Within each step of the SOJT procedure model, several sub-steps were identified, along with the knowledge and skills required for SOJT coordination and instruction, as suggested in the literature. The final survey instrument for training professionals included 80 competency items; the one for line workers, 63. In both surveys, three variables were included: current expertise level, desired expertise level, and importance of a competency. The reliability coefficients were obtained using Cronbach's alpha; all six were very high, from .97 to .99.

Findings

Training professionals identified 13 competencies as important (at least 5 on a 6-point scale) for coordination of SOJT (Table 2, next page).

Training practitioners did not select any knowledge or skills steps in evaluate or plan for delivery as very important. Only three items were below 4 on the 6-point scale: two competencies in administration (record instructional performance of trainers and file test results) and develop computer-based training materials. Paired t-tests showed significant (at $p < .01$) gaps between desired and current instructional expertise perceived by training professionals for about one quarter of the survey items; seven of the twelve items identified as significant were also identified as being critically important. There were no significant gaps in which the current level of expertise exceeded that desired.

Table 2, at the end of the paper, presents the highly-ranked SOJT competencies as perceived by line workers. Table 3, also at the end of the paper, includes many more items than Table 2, even though the total number of items in the survey sent to line workers (63) was fewer than the 80 items contained in the survey for training professionals. Only one item was lower than 4 on the 6-point scale by line workers: connect completion of OJT to rewards ($M=3.73$, $SD=1.55$). The line workers may have thought that rewarding is the responsibility of managers.

Line workers identified developmental needs (the gap between desired and current expertise) on over half of the items, which is more than training professionals identified. Most of the highly-ranked items (15 of 20) were identified with gaps. Thus, line experts did not think that they possessed the desired SOJT competencies.

Discussion

This study identified training practitioners who had coordinated SOJT and line experts with SOJT instructional experience. Only 10% of the pre-survey samples responded indicating that they had SOJT experience. This may mean that the majority of training professionals do not pay attention to SOJT or that, in spite of OJT's prevalence within corporations, it is not approached in the same systemic and structured way as other training methodologies. Their main interest may be on off-the-job training and informal OJT, which has been the most pervasive approach in training for task skills (Carnevale & Gainer, 1989).

Training professionals perceived items of analysis, design, and development as critically important (above 5 on the 6-point scale), but they did not identify items of delivery and evaluation. This may reflect the limitation of training professionals' responsibilities in SOJT to preparation and coordination for SOJT delivery, or they might underestimate the importance of these tasks.

Line experts chose delivery knowledge and skills as critical for SOJT. This might reflect the subtle message delivered to the line experts by the training professionals that limits their input into the process to the delivery phase. It might also reflect the "unconscious incompetence" of the line workers. If they have never received training on the broader role that they could play in SOJT, they may simply not have enough knowledge about the processes to recognize how they might strengthen SOJT by a more active role in the other phases.

A common phenomenon to both groups is that they recognized developmental needs in the competencies that they identified as most important. They perceived that they did not possess the necessary SOJT knowledge and skills needed, although all sample members were identified by themselves or their colleagues as experts.

Recommendations

This study produced a list of important SOJT competencies for training practitioners and SOJT instructors who are primarily experienced line workers, along with a gap-analysis list between desired and current expertise, based on the respondents' self-assessment. HRD managers might choose to use the list to select appropriate candidates for SOJT coordinators and for line worker instructors. In both instances, the list can be used as a basis for self-assessment and development.

Many authors have identified a major problem in OJT practice as being the selection of line workers to fulfill the OJT instructor role without any opportunity to learn how to instruct. The SOJT competency list for line workers might be used by HRD professionals to prepare a train-the-trainer opportunity for SOJT instructors. The list reflects the knowledge and skills that might be incorporated. If such an opportunity already exists, the list can be used to assess existing SOJT train-the-trainer.

Little research has been undertaken in the whole area of OJT (Rothwell & Kazanas, 1990a). One significant problem in conducting OJT research studies at the national level is that it is very difficult to identify SOJT experts. While this study effectively used one approach to identifying a sample, alternative approaches need to be explored.

Another research concern is to move past the global identification of competencies to begin exploring the competencies that would be useful in specific industries and for specific types of workers. It is probable that such industry and role/level competencies will vary considerably. Attention to this issue at the local level should also improve an individual organization's approach to SOJT.

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Table 2
Highly-Ranked Instructional Competencies for SOJT Perceived by Training Professionals (above 5 on 6-point scale: 1 to 6) (n=52 to 60)

Step	Competency	M/SD
Analyze	Observe performance on target tasks	5.47/.68
Design	Set objectives	5.47/.79
Deliver	Respond to trainees' concerns	5.38/.85
Develop	Develop performance measurement	5.32/.95
Design	Arrange learning events (explain, show, guided practice)	5.27/.69
Analyze	Identify needed knowledge, skills & attitudes for task performance	5.24/.88
Develop	Develop evaluation tools	5.23/.89
Analyze	Cooperate with line workers in task analysis	5.22/.83
Analyze	Build relationship with management	5.20/1.05
Analyze	Divide a job into tasks	5.17/.85
Develop	Modify the learning materials according to feedback about the pilot test	5.17/.93
Follow-up	Follow up on the trainees' performance evaluation by line experts after OJT	5.15/1.05
Develop	Listen to line workers' feedback actively after the pilot test	5.08/1.00

Table 3
Highly-Ranked Instructional Competencies for SOJT Perceived by Line Workers (rated above 5 on 6-point scale: 1 to 6) (n=30 to 32)

Step	Competency	M/SD
Deliver	Maintain instructor credibility	5.52/.68
Deliver	Understand SOJT objectives	5.44/.80
Deliver	Respond to trainees' concerns	5.43/.83
Evaluate	Observe trainees' task performance on the job	5.34/.90
Deliver	Deliver SOJT programs	5.34/.94
Deliver	Use effective communication skills	5.31/.78
Deliver	Give feedback about trainees' needs and achievement	5.25/.84
Analyze	Identify safety regulations	5.25/1.08
Evaluate	Determine needs for additional training	5.22/.79
Follow-up	Coach on dissatisfied parts of the trainees' performance	5.22/.87
Deliver	Respond appropriately to trainees' questions and needs	5.22/.94
Prepare	Place tools and/or learning materials at training site	5.19/1.00
Analyze	Assess trainees' current level of expertise on target tasks	5.16/.68
Deliver	Arrange relevant tasks	5.16/.90
Design	Arrange learning events (explain, show, guided practice)	5.16/1.16
Follow-up	Repeat earlier training steps as necessary	5.13/.79
Design	Provide feedback on appropriateness of objectives	5.06/.93
Deliver	Prepare equipment involved in target tasks	5.06/.93
Deliver	Use learning materials appropriately	5.06/1.15
Deliver	Demonstrate good performance	5.03/.84
Analyze	Identify needed knowledge, skills & attitudes for task performance	5.00/1.19

A Proposed Model of Approaches to Frontline Employee Development

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This paper proposes a model describing four approaches to frontline employee development. The model utilizes the political view of organizations in order to embody the divergent interests of managers and frontline employees related specifically to the employee development process. Within this framework, the ways in which frontline employees are influenced, directed, or selected to participate in developmental activities, the roles of managers and frontline employees, and expected employee development outcomes are categorized and described. Implications for HRD research and practice are discussed.

The emphasis many organizations are placing on customer satisfaction means that frontline employees are more critical than ever before. Frontline employees are those who are closest to the actual production of goods or delivery of services in organizations (Jones & Jacobs, 1995). Consequently, organizations have focused greater attention on the development of frontline employees, not only because of their strategic location in organizations, but also because of the many changes and technological advances that are affecting the work and roles of frontline employees (Jones & Jacobs, 1995). One recent study of organizations recognized for excellence in customer service explored how and why they provide good customer service (Jeffrey, 1995). The researchers identified a three part strategy used by the organization that included developing employees into professionals and motivating employees to stay and excel. These and related research findings suggest that organizational changes intended to improve customer service can be successful to the extent that they focus on frontline employee development.

Organizations and researchers have suggested a variety of ways in which frontline employee development should be approached. Some organizations have made distinctions between approaches to frontline employee development based on the role of the frontline manager or supervisor (Heraty, 1995). Managers can either be identified as the one primarily responsible for the employee development process, or identified as working in cooperation with employees to make employee development decisions. Perhaps the biggest trend in the literature is prescriptive approaches that involve both managers and employees in employee development planning activities. These prescriptions usually include identifying the gaps between current capabilities of employees and the core skill level the organization has determined it needs, and collaborative goal setting between managers and employees (see Morovec, 1994).

While many employers recognize the important role managers play in developing employees, Vaught and others (1985) point out that many managers may see employee development as the responsibility of the employee or another department. They suggest that managers may view employee development efforts as disruptive to work processes, may believe that it is not their responsibility to develop employees, may not know how to proceed in developing employees, or may not possess the interpersonal skills needed to actively engage in employee development activity (Vaught, Hoy, & Buchanan, 1985). These and other factors suggest that the role of the manager in the process is important for any classification of approaches to frontline employee development.

Another critical feature distinguishing between approaches described in the literature involves specifying the beneficiaries of employee development. Early writers such as Kellogg (1967) spoke of two basic organizational approaches to classifying the beneficiaries of employee development, with an infinite number of variations and mixes. The first she describes as the "crown prince approach" whereby a few individual stand outs are subjected to employee development opportunities and groomed to take on additional assignments in the future. The

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second she describes as an "opportunity for all approach." In some cases where organizations allow for all employees to participate in employee development activities, development opportunities are extended to both part-time and temporary workers (Picard, 1995).

The outcomes expected by employee development activities serves as another basis for distinguishing between approaches. For example, some companies have identified the satisfaction level of employees and customers, as well as reduced employee turnover, and improved organizational performance as important outcomes of institutionalized employee development practices (Drought, 1995). Others argue that employee development activities are a primary means for organizations to acquire or maintain a competitive advantage (King, 1995; Garavan, 1995). Still others suggest that a versatile and adaptable workforce is most desirable, arguing that employers must shift their employee development philosophy from that concerning a person's immediate employment, to employability; that is, making sure workers not only are prepared for current jobs, but have marketable, up-to-date skills they can transfer from company to company, even from one career field to another (Stuart, 1995).

Need for A Model

While there are a variety of factors contributing to the suggested approaches to frontline employee development, little has been done empirically or conceptually to categorize and describe the different approaches. Current models remain incomplete, failing to encompass the nature of the relationship of managers and frontline employees in the planning process, the beneficiaries of employee development, and the outcomes expected from employee development. A comprehensive model would serve to aid managers and researchers in describing and making judgments about an organization's approach to employee development. What follows is a definition of employee development, a proposed conceptual model of organizational approaches to frontline employee development, and a brief discussion of the implications of such a model for managers and researchers.

Employee Development

Employee development is the process that ensures employees in an organization have the opportunity to acquire the knowledge, skills and attitudes to achieve personal and/or professional growth. Employee development processes emphasizing personal growth are characterized by activities that expand an employees awareness about self or changes in patterns of behavior, attitudes and thoughts related to coping or managing demands that might exceed the resources of the person (Tansky, 1991). Employee development processes emphasizing professional growth are characterized by learning that is broad and related to the total nature of the individual rather than to a specific skill (Tansky, 1991). Some examples of this "total nature" include a person's health and energy; existential beliefs; commitments; social skills; social support; and material resources.

Employee development can then be distinguished from employee training by its purpose and time frame. While the purpose of training is to provide employees with the opportunity to improve knowledge, skills or abilities in order to improve job performance, the purpose of development is to focus on broader issues of personal and professional growth in order to improve individual effectiveness (Tansky, 1991). While training is expected to immediately result in increased or improved performance for the organization, employee development is a longer term process resulting in the expectation of behavioral and attitudinal change of value to the organization. Many organizations hold as a central premise that, if the personal learning capabilities, competencies, and potential of individuals are improved, this will cascade into wider organizational development and improved business performance (Gibbs, 1995).

Approaches To Frontline Employee Development

Approaches to frontline employee development can best be described by viewing the process as a system of government (see Morgan, 1986 p.143). There are a number of reasons why viewing frontline employee development as a political activity is advantageous. First, viewing the employee development process from a political perspective allows one to explore and describe the nature of superior-subordinate relations, conflicting organizational task demands on the one hand and individual needs and interests on the other, and how these conflicting issues might be resolved. Second, taking a political view enables one to see how approaches to frontline employee development are interest-based with managers and employees potentially having conflicting interests. A third advantage of this view is that it accounts for ways in which frontline employees are influenced, directed, or select to participate in developmental activities.

By taking this view, four distinct employee development approaches emerge in the literature, each having a different set of assumptions and prescriptive practices. Figure 1 describes the four approaches which include: laissez faire, co-determined, meritocratic, and autocratic. What follows is a definition and description of the key features of each approach.

Laissez Faire A laissez faire approach to frontline employee development is defined as the system whereby frontline employees plan and participate in employee development activities without management interference, regulation or control. In this approach, the primary responsibility for employee development rests with each employee. Divergent interests of an employee and the organization are most likely reconciled by the individual employee. Under a laissez faire approach, a frontline employee self identifies needs and/or interests, and seeks out related developmental opportunities. Those frontline employees that are self motivated tend to pursue and participate in employee development. Managers on the other hand, have limited involvement in identifying employee needs or interests, or in determining which development activities are appropriate for employee participation. Outcomes of the laissez faire approach tend to reflect employee identified personal and professional growth areas. Examples of these types of outcomes may include: professional fulfillment and satisfaction; self confidence; the ability of the employee to handle stress, tension, frustration, and conflict; or effective career decision-making.

Co-determined A co-determined approach to frontline employee development is defined as a system whereby managers and employees collaborate in planning and participating in employee development activities. Under this approach, managers and frontline employees work together to identify individual and organizational needs and select related employee development activities to address those needs. Divergent interests of the employee and the organization are most likely reconciled through interpersonal processes involving the manager and the employee. Under a system of co-determination, employees are responsible for identifying and discussing personal and professional needs and interests with managers. Managers clarify expected behaviors and information with the employees, and assist them in recognizing their strengths and weaknesses. Managers also assist employees in identifying development opportunities related to the agreed upon needs and interests. Outcomes of the co-determined approach tend to reflect personal and professional growth areas mutually identified by the manager and frontline employee, and those unique to the manager and employee's relationship. Examples of these types of outcomes may include: improved relationship between supervisor and employee; improved morale; certain attitudes and skills that successful employees usually display are developed; or professional fulfillment and satisfaction.

Meritocratic A meritocratic approach is as system in which frontline employees with superior qualities are afforded opportunities to participate in employee development activities. Under this approach, the organization has formalized a way to invest in those individuals who have demonstrated ability or acheivement. Written policies or management rules may determine who qualifies for employee development opportunities. Divergent interests of the employee and the organization are likely reconciled through the use of written policies or rules. Under a meritocratic approach, employees are responsible for meeting the prerequisite requirements before qualifying to participate in employee development activities. These requirements may

include level of performance, level of ability, years of service, or some other form of demarcation. Employees may be required to apply to participate. Managers may serve to inform employees of opportunities, clarify written policies or rules related to participation, and identify those that meet the specified requirements. Outcomes of the meritocratic approach tend to reflect personal and professional growth areas identified by the organization as being important. Examples of these types of outcomes may include: staff preparedness for additional roles; employees developed for promotion; or specialists enabled to use new or different procedures.

Autocratic An autocratic approach to frontline employee development is defined as a system in which managers have the authority and primary responsibility for directing or requiring frontline employees to participate in employee development activities. In the autocratic approach, divergent interests of employees and the organization are most likely reconciled by managers. Under an autocratic approach, either the organization prescribes, or the manager identifies employee needs, and links the employee to related developmental opportunities. Managers direct employees to specific development opportunities that satisfy the organizational requirement of highly qualified employees. Those frontline employees who are deemed by the manager to have developmental needs are required to participate in employee development activities. Employees are expected to participate in prescribed developmental activities. Employees have limited involvement in planning or identifying development experiences. Outcomes of the autocratic approach tend to reflect organizationally identified or manager identified personal and professional growth areas. Examples of these types of outcomes may include: employees' collective attention is focused on certain skills like customer service, CQI tools, interactive skills; the successful introduction of change to the organization; an organizational wide initiative is successfully launched; or employees' understand and carry out organizational policies.

Discussion

The proposed model views the employee development process as a system of government. It enables one to consider the dynamic tensions between organizational needs and employee needs and interests. This view also encourages planners and analysts to recognize the many different outcomes that may be related to each approach specified by the model.

One limitation of this model in organizing approaches to employee development is that it may overstate the power possessed by managers. A case can be made that everyone in an organization has access to some form of power, including frontline employees, which at times might undermine the position power of managers or the structural dynamics of the organization. Despite this limitation, the model brings us one step closer to understanding the different organizational approaches to frontline employee development. Research needs to be conducted to validate the existence of these four approaches. More specific research questions can then be addressed regarding the relationship between the approaches and individual and organizational outcomes. This research area will enable researchers to make judgments about different approaches, and prove useful to HR managers and HRD professionals as they chart directions and highlight obstacles to frontline employee development.

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Table 1

Approaches to Front-line Employee Development

	Laissez Faire	Co-determination	Meritocracy	Autocracy
Definition	A system in which employees participate in planning and participating in employee development activities without management interference, regulation or control.	A system in which managers and front-line employees collaborate in planning and participating in employee development activities.	A system in which front-line employees with superior qualities are afforded opportunities to participate in employee development activities.	A system in which managers have the authority and primary responsibility for directing or requiring front-line employees to participate in employee development activities.
Input: Role of Manager	Limited involvement in the employee development process.	Clarify expected behaviors and assist employee in recognizing their strengths and weaknesses. Assist in identifying development opportunities.	Clarify written procedures and rules. Identify employee standouts who qualify.	Direct employees to specific development opportunities in order to satisfy the organizational requirement of highly qualified employees.
Input: Role of Employee	Self identify needs and/or interests. Seek out development opportunities.	Identify and discuss personal and professional needs and interests with managers.	Achieve prerequisites to participation. Employees may apply to participate.	Limited involvement in the planning process. Participate in prescribed developmental activities.
Process: Who Participates	All interested and self-motivated front-line employees.	All front-line employees participate in the process.	Front-line employees who have met the specified requirements for participation.	Front-line employee identified as needing development participate.
Process: Divergent Interests	Employee has primary responsibility for reconciling divergent interests.	Divergent interests most likely reconciled through interpersonal processes involving the manager and the employee.	Divergent interests most likely reconciled through the use of written policies or management rules.	Divegent interests most likely reconciled by managers.
Outcomes	Reflect employee identified personal and professional growth areas.	Reflect personal and professional growth areas mutually identified by the manager and front-line employee, and those unique to the manager and employee's relationship.	Reflect personal and professional growth areas identified by the organization as being important.	Reflect organizationally identified or manager identified personal and professional growth areas.

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Rethinking The Ties That Bind: An Exploratory Study of Employee Development in Utilities in Canada and the United States.

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To investigate the concern that underlying assumptions and beliefs were seriously limiting practice, the authors conducted telephone interviews with eleven employee development specialists in gas and electricity utilities in the U.S. and Canada. The results of the study point towards the limiting effect on HRD practice of beliefs in behaviorism and the administrative nature of HRD. This study also highlights the need for HRD practitioners to further comprehend the complexities of employee development.

This exploratory study was conceived, in part, to investigate the growing perception that human resource development (HRD) interventions are becoming increasingly uncoupled from organizational development needs. Under central consideration was the idea that there are ties that bind HRD from being more effective as a strategic organizational resource. Specifically, we wondered to what extent HRD practice was bound by long-established and widely-held preconceptions among HRD practitioners about the nature of organizational structures and processes.

Indeed we were prompted to consider the suggestion that HRD practitioners may well be working from conceptual perspectives of the ties that bind an organization together which may no longer be in alignment with organizational realities. It seemed to us that HRD practitioners have long regarded the organizational chart as the embodiment of organizational reality and have based their practice on strengthening the ties captured in this chart. Yet the organizational chart, as a static, linear, one-dimensional diagram can in no way account for the powerful, dynamic processes which characterize the social and political nature of organizational life. These dynamic processes tie an organization together in ways that are subtle and complex, and, in contrast to the explicit formal ties of the organizational chart, are very informal and highly abstract.

Recent rethinking in the area of organizational development underlines the need to uncover and make explicit the real ties which bind an organization together. Only if these ties are identified can they be constructively developed. Yet it seems that an understanding of these dynamic ties is only in its infancy within in the field of HRD scholarship. A rudimentary or negligible understanding of the actual relationships within organizations has in many instances affected the way that leadership responsibility has been conceived and distributed.

One important consequence of this limited view of organizational life has been a tendency to invest scarce financial and organizational resources in the maintenance of a hierarchical entity. Indeed there often appears to be a disproportionate emphasis on the organization itself rather than on the mission of the organization (Drucker, 1995). In times of fundamental change, focusing on shoring up organizational structures instead of rethinking the needs of business and how to best organize to serve those needs may well prove fatal.

Yet another tie that binds practice is the web of underlying assumptions and implicit beliefs which color organizations' members' views of their own HRD function. Some organizational members look to employee development as a universal savior to virtually any organizational issue. Others see it as offering poor value for money, yet as a necessary evil in the absence of few alternative solutions. A proliferation of perceived "flavor of the month solutions", prescribed by corporate warriors from the burgeoning management consulting industry, has further polarized perceptions of the effectiveness of HRD. The appearance of a growing disconnection between HRD and organizational effectiveness could well result in a dangerous erosion of the integrity and credibility enjoyed by HRD practitioners among stakeholders.

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A new climate characterized by the need to proactively manage recurring, discontinuous change prompts a reexamination and reinterpretation of long-held, subtle beliefs (Handy, 1994). For example, Senge (1990) advocates the need for those involved in managing transformational change to have embarked on their own process of transformation beforehand. Indeed, Drucker (1995) insists that before the end of the century the concept of the organization as we now understand it will require fundamental revision. Therefore a careful reexamination of what HRD practitioners believe and practice is critical to the profession's capacity to effectively serve a range of emerging organizational challenges brought about by increasingly complex and volatile business environments.

Methodology

This study was deliberately exploratory in nature. It was intended to clarify basic questions about contemporary HRD practice while also serving as a basis in clarifying the researchers' thinking for subsequent in-depth studies concerning formal and informal learning in professional engineering practice and organizational learning in the Canadian petrochemical industry. A benchmarking study (Flower, 1993) was used to gather information from eleven gas and electrical utility companies in two Canadian provinces and six US states. In early 1995, semi-structured telephone interviews were held with HRD practitioners responsible for employee development in each company. In addition to the telephone survey, in-depth interviews on the nature of organizational learning were held earlier in the year with members of a local telecommunications utility which was in the process of been reorganized from a state-owned enterprise to a publicly traded company. We believed that lessons learned in telecommunications could be useful to other infrastructure industries encountering rapid and fundamental reorganization.

Gas and electrical utility companies from a range of markets delineated by different regulatory regimes were chosen for the study since we believed the perception about the degree of competitiveness in an industry was a critical consideration in examining how companies with similar business missions used HRD interventions to respond to emerging business challenges. Utilities are one of the few remaining infrastructure industries in North America where it is relatively easy to isolate markets ranging from relatively benign to highly competitive. It appeared to us that deregulation, or even the perception of imminent deregulation, has been prompting many companies to reconceptualize what employee development is, where it occurs, and how it is facilitated.

The study was guided by the following questions:

- What are the philosophical orientations and current practices related to employee development in the selected organizations?
- What are major internal and external influences which drive employee development philosophies and needs?
- What processes are being used to define and respond to changing employee development needs?

For the purposes of this study, the ASTD definition of employee development as given in Rothwell and Sredl (1992) was felt to be too narrow, since it specifies the use of "planned learning" (p.7). We broadened this definition to include all activities in which individuals and teams engage to more effectively meet organizational objectives.

Findings

The findings of this exploratory study are presented with reference to the questions which guided the research.

Philosophical Orientations and Current Practices Recent employee development activities in the 12 companies studied underlined several emerging leadership issues. While technical training and development was well established, employee development, as a new area, was often organized as a separate entity under the human resource development umbrella. In six of the companies, employee development, as a separately-organized function, constituted a new organizational initiative. Commissioning new units to address employee development issues which exceeded the scope of traditional training and development was seen as an important political

and structural organizational response. The companies researched indicated that employee development had only become a pressing concern for them in the six to eighteen months prior to this study.

Employee development needs were most frequently identified in the area of soft skill development. Effective communication, coaching, mentoring, and negotiating skills were reported as areas of particular need. Research participants saw these skills to be required by a wide range of members in the companies, especially front line staff and supervisors. Consistent with the shift to a broader definition of HRD, participants reported a move to establish demonstrable leadership competencies. Interpersonal, technical, business, and overall leadership skills were four basic categories into which the study participants grouped leadership competencies. All the organizations surveyed expected their members to demonstrate greater responsibility for the achievement of organizational results. Those results would be measured against demonstration of the leadership competencies. A variety of performance management systems were being considered by the companies to assist in operationalizing this concept.

All companies in the study reported that broadening the scope of employee development was occurring through a process of gradual evolution. Technical training issues had previously dominated employee development agendas due to the engineering and infrastructure orientation of gas and electricity utility operations. Within this framework, employee development for management had been organized around formal management development and succession planning programs. These programs tended to focus on high-potential managers who were being considered for officer level roles. Several participants reported that their organizations were in the process of rethinking this approach to employee development, giving as reasons questionable return on money invested and concern about the effectiveness of formal management development in a rapidly transforming business environment.

One very important consideration, often seen as a complicating factor, for employee development in utility companies was the complexity presented by organized labor environments. Only two companies in the study explicitly viewed union leaders as important partners in rethinking employee development. Working effectively within a unionized operating environment to achieve organizational results may be one of the most interesting political and logistical challenges HRD practitioners face in the utility industry.

Influences Driving Development Philosophies and Needs With one exception, deregulation and imminent deregulation of gas and utility markets was identified as the primary catalyst for rethinking employee development. Deregulation was not universal in its form or process. Nevertheless, being presented with the possibility of greater competition prompted many companies to reexamine their business environments, including a review of how the organization and its members were positioned to respond. The realization that business was becoming more complex and volatile was a further influence. Greater direct competition, changing customer expectations, increasingly hostile ratepayers, legal and social concerns about the environment, and changing expectations among employees were cited as other themes influencing employee development.

Major internal corporate influences on employee development arose out of organizations' attempts to put in place systems for realizing systematic continuous improvement. Three companies reported that their Total Quality Management (TQM) processes had uncovered significant employee development deficiencies. Substantial restructuring and downsizing in many companies revealed that front-line staff and supervisors were being expected to accept important organizational decision-making responsibility, often with a lack of the necessary skill sets. Executive-level sponsorship of employee development as a major senior management priority was also reported as a crucial internal influence for rethinking employee development.

Processes of Employee Development Participants in this study viewed employee development as the primary means by which to implement leadership competencies. Action research methods, ranging from basic fact-finding to elaborate consultative exercises involving a range of organizational stakeholders, reflected the processes used to identify corporate leadership competencies. The study also highlighted the importance of senior leaders playing an active role in redefining employee development as a critical lever for achieving organizational results. These results were increasingly linked to prescribed corporate strategic directions.

The majority of companies surveyed described a range of formal, classroom-based stand-up training techniques as the primary means for implementing employee development initiatives. These techniques ranged from in-house supervisory development programs to off-the-shelf front-

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line leadership programs. Indeed most companies reported using a combination of custom-designed and off-the-shelf formal training programs.

Only one respondent in the study identified the combination of formal and informal activities as a powerful development tool. This respondent described a process of regular in-house executive lunches, with expert speakers facilitating dialogue on a range of topics of emerging corporate concern, complemented by informal dialogue among the participants. These activities were reported as an important catalyst for the development of more effective communication within this particular organization.

Discussion

The findings from this study indicate that employee development has become an urgent priority for companies in infrastructure industries. However while it is undeniably a good sign that the practitioners in the companies studied were aware of, and were actively engaged in, working on emerging employee development issues, an analysis of the information these practitioners gave also begins to reveal the ties which bind their practice.

The widespread use of behaviorist, control-oriented language characterized the responses of all the HRD practitioners interviewed in this study. We further discovered a widely-held belief by many practitioners that organizationally-developed and prescribed leadership competencies should drive the behaviors of line staff and management. It is significant for us that no participant made mention of the need to actively engage people fully as human beings in their work or to provide sufficient transitional support for organizational members to assist them respond to fundamentally different workplace expectations. We identify here an important tie that binds, the underlying basis for which can be found in behaviorism. This is, of course, not a radical new insight. Indeed it has been noted that the roots of HRD lie firmly embedded in behaviorist psychology (Goldstein, 1980). The critical question that must be asked, however, is to what extent HRD practice founded on behaviorism, with its accompanying linear, simplistic and mechanistic world view, remains effective in the rapidly changing world of the '90s? In fact, there appear to be serious limitations to employee development grounded in a behaviorist approach. As Marsick (1988) points out:

> ...behaviorism does not foster the reflective abilities needed to assist people at all levels to learn in the workplace, particularly in their informal interactions, although such training might successfully develop specific skills (p. 187).

It is indeed very difficult to reconcile a view of learning based on stimulus and response with the need to facilitate reflection and learning in the workplace. At best HRD interventions grounded in behaviorism can only invite reaction to predetermined stimuli. However such an approach does little to unleash the innovation and creativity increasingly required in a range of modern enterprises during times of rapid, structural change (Handy, 1994). In short, behaviorism as a dominant influence on approaches and methods in HRD ties the hands of HRD practitioners.

It is indeed alarming that an over-reliance on behaviorism in HRD practice has resulted in such a dependency on formal training that for many people the terms "employee development" and "training" seem synonymous. The overwhelming majority of participants in this study reported using formal methods to implement new employee development initiatives. In fact only one person interviewed recognized the power of informal methods in employee development. Indeed the methods traditionally used for employee development have been almost exclusively formal, stand-up training interventions (Marsick, 1988). There has been little incentive to promote other development practices. For a number of reasons, practitioners have been very comfortable with formal training. The method is still widely, though uncritically, accepted as neatly "scientific". The results of formal training are thus believed to be accurately measurable, and therefore provable. Furthermore, formal training has always been perceived as relatively easy and efficient in its administration. Last but not least, this essentially transactional process (Galbraith, 1990) offers a method by which HRD practitioners can exercise creativity and control over the development process. From our perspective, though, a continued emphasis on the use of formal HRD interventions seriously limits effective practice, since these formal interventions on their own are highly unlikely to facilitate transformational changes to deeply rooted attitudes, and therefore to effect major changes in behavior.

Nevertheless, formal training interventions may appear successful in certain employee development situations, notably those involving the transfer of technical information. The major

limitation of formal HRD interventions, however, is that they fall short on incorporating the operational and political dynamics of the primary place of work. Additionally, formal interventions also fail to incorporate much of what has recently been advanced about workplace learning. Watkins and Marsick (1992) noted:

> Workplace learning involves a social contract among individuals who work together to achieve higher-order organizational goals. Learning often takes place in teams, and is spread throughout the organization by groups that cross boundaries and share their insights so that learning can be captured, collected, and embedded in change in the system, policies, or procedures (p. 292).

What is needed, in part, is a broader conception of employee development which enables stakeholders to understand that learning occurs in a variety of settings and forms and can be facilitated through a range of formal, informal, and incidental means.

We also identified a factor which further complicates the dynamics of HRD practice and presents another tie that binds. It became clear in the process of this study that HRD in most organizations has traditionally fallen under the domain of the global human resources function. This has led to HRD being devised and practiced as a primarily administrative function: conceptually a function that manages an input of production, albeit an important one. Interestingly though, when performance and people-related problems have occurred in operational functions, line managers and senior leaders have demonstrated remarkable proficiency in labeling these problems as human resource problems. Human resource practitioners have in turn become quite efficient at prescribing HRD interventions as a universal prescription for dealing with a myriad of organizational issues.

The problem with a primarily administrative conception of HRD is that most important organizational issues are operational and strategic in nature, not administrative. Indeed the limited scope of most HRD interventions (i.e., classroom-based, stand-up training; off-the-shelf packages), and the historic disconnection between an organization's operations and HRD practice often confound efforts for achieving timely, anticipated organizational results. The primary place of work is likely a more effective place to tackle many of these issues. This is particularly so if one considers that accountability for many "human resource" issues is more likely to legitimately reside among line staff and leaders than with HRD practitioners. This, however, by no means implies a diminishment in the role of the HRD practitioner; in fact quite this view advocates quite the opposite. HRD practitioners are now challenged to rethink their role as no longer being fundamentally administrative. In a strategic role, HRD practitioners have an important, if not vital, mainstream contribution to make to the achievement of organizational results.

In order to become effective strategic partners with line functions, HRD practitioners will need to involve themselves in a careful examination of their own beliefs about HRD practice and their organization's business (Argyris and Schon, 1974). Additionally, HRD practitioners will need to deepen their understanding of what is known regarding adult learning (Brookfield, 1985), including developing a greater awareness of when, where, and how learning occurs in organizations (Marsick and Watkins, 1990). Indeed Argyris (1991) has suggested:

> Any company that aspires to succeed in the tougher business environment of the 1990s must first resolve a basic dilemma: success in the marketplace increasingly depends on learning, yet most people don't know how to learn. What's more, those members of the organization that many assume to be the best at learning are, in fact, not very good at it... Most companies not only have tremendous difficulty addressing this learning dilemma; they aren't even aware that it exists. The reason: they misunderstand what learning is and how to bring it about (p. 99).

The self-perception of HRD practitioners as intelligent, valuable organizational resources may inhibit their disposition to engage in critical self reflection regarding the efficacy and appropriateness of their roles within an organization (Mezirow, 1991). Furthermore, since many HRD practitioners have perceived themselves as the gatekeepers and stewards of important information which organizational members require to perform, many may also exhibit the traits of defensive reasoning (Argyris, 1991) in an attempt to protect perceived loss of status and power. Nevertheless, in turbulent times of transformational change, ignoring the dynamics of change no longer becomes a viable option, while actively resisting change can only lead to marginalization.

Another fundamental concern arising from this study is that while many HRD practitioners espouse to be aware of, and involved with, gearing their activities to organizational strategy, we found little consistent evidence of this in their practice. Herein is a central conceptual

point for HRD scholars and practitioners to consider. It many well be that the theories of practice which HRD practitioners espouse do not consistently reflect their action in practice (Argyris and Schon, 1974).

An interrelated factor we identified which likely restricts an HRD practitioner's ability to achieve role redefinition may well be the political dynamics surrounding HRD in many organizations. These dynamics have led to polarized thinking about the function and utility of HRD. As Jolles (1995) notes "it seems in corporate America, you either believe in the idea of training, or you do not "(p.52). For us, this dichotomy embodies the behaviorist view in an overly simplistic representation of HRD as consisting of either supposedly useful training or supposedly useless training. Furthermore, we regard this dominant view of HRD as representative of a world view which uses reductionism to establish absolute truth. As long as HRD practitioners seek truth in simplification, their practice will be markedly limited. We suggest that a guiding principle of the new role of HRD practitioners should be one of beginning to see themselves as facilitators of complex non-linear processes, comprised of interactive dynamics which far transcend the simplicity of the organizational chart. In this way it should be possible to identify and work with complexity in manageable amounts rather than to somewhat naively seek simple solutions to complex situations.

Complexity of the Ties that Bind The emerging dialectic on workplace learning and the need for a careful reexamination of contemporary HRD practice is a critical first step. In this study, it was clear that most companies surveyed saw employee development as a crucial lever in enabling them to achieve organizational results in a changing business environment. What was also clear from our interpretation of the findings, is that the overwhelming majority of practitioners surveyed seemed unaware of the complexity of the employee development situations they were presented with and the range of activities that might be employed to facilitate individual, team, and organizational learning.

There are important implications arising out of the possibility that HRD practitioners hold the key to many of the ties that bind modern organizations. This suggestion invites a critical analysis of HRD's role in organizations. It prompts consideration that employee development may be the only really effective means for transformational change. It requires a much broader conception regarding the form of employee development and the place where development occurs (Marsick and Watkins, 1990). It further challenges a range of organizational stakeholders to consider that employee development as it is presently practiced may be seriously misaligned with what we have more recently discovered about how adults learn (Brookfield, 1985). Future employee development models may more effectively be conceived as an integrated continuum of activities ranging from formal to highly informal. Indeed any future model will have to recognize the importance of incidental, i.e. informal and unplanned, learning in the workplace. In this sense, HRD practitioners and organizational stakeholders are challenged to reevaluate the assumptions they hold about the role and place of HRD, if HRD is to maintain credibility within organizations.

At another level, there is a challenge to understand that the structural nature of organizations as characterized by the relationships within and among organizations is also rapidly changing. The hierarchical, monolithic organization characterized by a one-dimensional organizational chart is gone forever (if indeed it ever really existed in the first place). Relationships within and among organizations are creating new ties, some which bind, but many which liberate. These are partially characterized by Handy's (1994) metaphor of the Shamrock organization as an organization with a much smaller cadre of core staff, growing ranks of temporary and part-time workers, and in which all non-essential work is contracted out. This more pluralistic organizational form also introduces new complexities for how work is organized and for understanding how organizational learning occurs. Human resource development practitioners and scholars are challenged to examine how the changing nature of organizations can be more clearly understood and explained. Applied scholarship to inform theory and practice in this area is most likely to be effective if it is descriptive rather than normative and is grounded more firmly in the traditions of action science (Argyris, Putnam, and Smith, 1985).

Conclusions

Our research uncovered several interesting findings from practice that can be used to guide scholarship and practice in human resources development. Although many HRD practitioners have

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realized the importance of employee development, they may not have done so with an explicit awareness of the assumptions underlying their practice, as well as the full extent of the organizational context. Indeed HRD practitioners could easily become their own worst enemies by advancing a limited conception of employee development as a prescription for a range of complex and ill-defined organizational issues without first explicitly defining the ties that bind. Developing skills for critically reflecting upon their own practice is crucial to the credibility and integrity of HRD practitioners. An examination of assumptions underlying practice can be an important first step in rebuilding HRD as a strategic organizational resource (Argyris, 1991; Mezirow, 1991). What might have been considered good practice at an earlier stage of the field's development may no longer be effective for a business environment characterized by greater volatility and transformation (Drucker, 1995).

The results of this study also lend support to the concern there is an intellectual and ethical problem in HRD which is approaching a crisis stage. The credibility of HRD practitioners as facilitators of organizational change has come under greater scrutiny as "flavor of the month" approaches such as ill-conceived quality management and reengineering initiatives, and more recently the learning organization, have fueled cynicism within organizations and throughout the HRD field. As organizational operating environments become more complex and volatile, as companies continue to restructure and reorganize relationships, and as customers' expectations increase, it appears that a broad-based approach to employee development which integrates the range of formal, informal, and incidental learning in organizations may well be a critical lever for organizational survival and prosperity.

Organizational members at all levels need effective support and encouragement to make recurring transitions and transformations. North American HRD scholars and practitioners are encouraged to rethink their assumptions about the role and function of HRD. This includes creative new thinking and dialogue regarding the range of initiatives which can be encouraged to unleash the range of learning in organizations. Radical times call for radical thinking. Evolutionary thinking and implementation of traditional HRD initiatives in revolutionary times will most likely result in a prescription for disaster (Larson and Mingie, 1992).

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A Study of the Need for Literacy Skills Improvement in a High Technology Company

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This study reports on a three year project undertaken by a high technology company to upgrade the basic skills of its employees. The need for a workforce literacy program, the attitudes of the employees to basic skills classes, and the effectiveness of the classes were evaluated. Workers needed more help in mathematics than in reading. However, basis skills deficiencies were less than those in the population as a whole.

The need for workplace literacy programs that teach foundational skills to employees has been documented in nearly all major policy arenas. Human capital investment in the lower non-management segment of the workforce has been championed by the US Department of Labor and by such prominent workforce and educational organizations as ILO, Unesco, ASTD (Carnevale, Gainer, and Meltzer, 1990). Recent research and writing sponsored by the World Bank (Berryman, 1994) the OECD (Cappelli and Rogovsky, 1995; Hirsch and Wagner, 1993) focuses on the benefits of foundational skills training to employers and to employees. Berryman argues that the foundational skills of adults affect not only the wealth of individuals but also nations directly through the often invisible and poorly measured human capital producing mechanism of employer sponsored training. The advocates of these foundational programs at a national and international level seem convinced of their value, despite lack of any proof that programs have a track record of improving either business efficiency or worker satisfaction with their situations (Hull, 1993).

The case can be made that improvement in the foundational skills of the workforce is especially crucial in heavy manufacturing industries undergoing radical change in production methods. The need for workforce literacy in high technology production where the assumption is that workers have more education and training is less clear. Most research on workforce literacy programs has taken place in industry employing lower skilled workers, such as textile mills or heavy manufacturing (Hart-Landsberg Reder, 1993). Most targeted industries have also been those that are located in states with high drop-out rates, with lower rates of literacy, or with large numbers of workers for whom English is not their first language. Most research and writing in this area has also been limited to reports of program implementation (Sticht, 1995) or evaluation design, and omits any actual data on program results (Mikulesky & Taylor, 1994). Research needs to be done to determine the specific industries that benefit from workplace literacy and those where no intervention is needed.

Not only is research lacking, but there is no agreement on techniques to assess literacy levels in the workforce. Most writers describe levels needed in terms of grade level equivalents. Carnevale suggests the target population for job literacy programs," would be that majority of workers who are intermediate literates with fourth to eighth grade literacy equivalency." (Carnevale, Gainer, and Meltzer, 1990, p.78). However, as Sticht (1990) points out in his review of testing and evaluation in adult literacy general literacy of the type taught and tested in grade schools and the specific forms of literacy needed at work are different. A test of general literacy exemplified by most standardized tests will not necessarily measure the specific literacy skills used in specified jobs. But developing tests of the literacy needed for each separate job specification is expensive and difficult to validate. In some cases the courts have held that these tests are illegal (Park, Dawis, 1986).

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The Purpose of the Study

This case study describes a three year workforce literacy project in a high technology company. The management recognized the need for developing a skilled workforce and was willing to undertake a broad workforce literacy program, if one were warranted. Before the company started on the project it was necessary to find out first whether a workforce literacy program was needed. Did the workers actual skill levels match those of the job requirements? Did the workers themselves see any need for skills improvement, and would they take part in skills improvement programs if they were offered? We also collected information on educational level, occupational classification, and age to see how these variables influence the need for, and attitude of workers towards improvement of basic or foundational skills Second, we developed a workforce literacy program for those workers who needed it. We evaluated the learner outcomes of classes and the company satisfaction with the final product. We framed our study around the following questions:

1. Do workers in high technology manufacturing in a region of the country with high literacy rates have the necessary literacy to match changing job requirements?
2. What percentage of workers themselves perceive they have a need for literacy or foundational skills improvement?
3. Do demographic variables such as age, educational attainment or occupational classification of the learners influence the need for skills improvement?
4. Are classes designed to improve worker skills in reading and mathematics effective for company performance needs?

Methodology

The company and its workers. A high technology company manufacturing component parts of computer disk drives was the site of the study. The company holds 60% of the world market share of its product line and in 1994 grossed $238 million in sales. The plant employs 3300 workers in Minnesota and South Dakota and is opening a new plant in Wisconsin. Three divisions were selected for this study as being critical to company manufacturing. These divisions were the ones where the company was altering the mode of production. One hundred and eight workers were engaged in technical jobs making precision parts used in computer disk drives. A second segment of 37 skilled workers from the tool and die trades worked at a branch of the plant in an adjoining state and 89 unskilled maintenance workers performed a variety of janitorial and waste disposal functions The technicians were involved in the actual production of the suspension parts and were required to use statistical process control monitoring and evaluation techniques.
The workers were on average in their 30's (See Table 1). The maintenance workers and skilled crafts group were older. The workers were predominantly male. This predominance of males reflects national trends where women are less represented in assembly line manufacturing jobs and the skilled trades. The group all had some post secondary education with 13 plus average years schooling.

Assessing the Need for Reading, Writing and Mathematics An interview questionnaire was developed in consultation with a workplace advisory committee consisting or workers, human resource personnel, and the researchers. The questionnaire had three sections. The first section asked 26 questions about training, workers' perceived need for basic skills improvement, interest and importance of basic skills in their current jobs, and the need both they and other workers might have for basic skills brush-up. Workers were asked if they saw their own skills as adequate to their jobs, and what classes, if any, they desired to upgrade their reading, writing and mathematics. Respondents were asked to rate interest and importance on a one to ten point scale, with 10 being the most important.

The second section of the questionnaire collected relevant demographic data on participants relating to age, years of education, and job experience. A total of 224 workers were interviewed, and they filled out questionnaires in small group sessions.

Basic Skills Testing The Adult Basic Learning Exam (ABLE) test was selected as a screening measure to identify those workers with less than an eighth grade level in reading or mathematics. The ABLE meets accepted psychometric requirements, and is easy to administer, especially with larger numbers. The test is untimed and the reading comprehension and mathematics subtests take less than 30 minutes each for most adults. It also looks "adult". The only other standardized test, the Tests of Adult Basic Education (TABE), is more academic in content, is timed, and is more difficult to administer. Level 2 of ABLE which measures grades 4 through 8 was selected as the level most appropriate to identify those workers who fall into Carnevale's (1990) high risk group grades 4 through 8. Reading and mathematics scores for 233 individuals were obtained. The workers' perceptions of the need for literacy skills were then compared to actual scores on a standardized test (ABLE).

Assessing the reading, writing and mathematics needed to perform each occupation. A systematic collection was made of the reading, writing and math skills currently used in each occupation. Individual interviews were conducted with 10% of the workers who were asked to bring samples of all the reading, writing and mathematics they used on their jobs. There were then asked to evaluate the importance, (very important, moderately important, or unimportant) and frequency of use (daily, weekly, or less) of each document. Lists of the materials and the importance of each set were checked with supervisors who were in agreement that all materials involving reading, writing, and mathematics were included A readability and comprehensibility analysis was done on each document and the relevant reading grade levels and mathematical skills were identified. Writing skills were listed separately by type.

Setting Up Foundational Skills Classes and Evaluating the Results Once the workers had been tested and the skill levels of the various occupations established, the foundational skill classes were set up. Customized math and reading courses were offered to employees by the local technical college. Curriculum was targeted to the precise skills needed. The reading class was taught twice a week for periods of 90 minutes over a period of 7 weeks. Fractions and decimals were the most needed mathematics skills. All skills were taught in a work related context. Work was individually paced. The mathematics class consisted of 13 90 minute classes for a total of 19.5 hours. Test-retest results using standardized tests and questionnaires, to assess the satisfaction of the participants who completed the program were analyzed. In addition, interviews were conducted with management and the educational provider to determine their overall satisfaction with the program.

Results

How did Workers Perceive the Need for Foundational or Basic Skills? Workers felt foundational skills were important on the job and were interested in taking classes. When asked how likely they were to attend such classes if offered, the average response was 8 on a 10 point scale with 0 as no possibility of attendance and 10 a certainty See Table 1). The assembly workers and tool and die workers saw reading, mathematics and writing as most important (between 7 and 9 on a 10 point scale.) The maintenance workers rated each skill slightly lower (See Table 1). All workers were correct in their observation that mathematics was more needed in terms of skill upgrade than reading. More participants expressed interest in mathematics classes than in reading (See Table 1). The group with the lowest scores in reading (maintenance) also expressed least interest in taking reading classes.

Table 1: Reading and Mathematics Test Scores and Interest in Classes

Occupation	high-tech assembly	mainten -ance	tool & die
Average age	30	35	37
Sex	m.63 f.45	m.89 f.0	m.24 f.3
Years school	13.4	13	13
Reading level (ABLE)	12+ range 3.2 -12+	12+ range 4.0-12+	12+ range 4.9-12+
Math level (ABLE)	10 grade range 5.9 -12+	9 grade range 4.0-12+	11 grade range 5.4-12+
Importance reading on job* 1-10 scale	8	7	8
Importance math on job* 1-10 scale	8	6	7
Importance writing on job* 1-10 scale	9	7	8
% intend to retrain	44%	50%	62%
% interest in reading class	46%	27%	59%
% interest in writing class	55.5%	34%	66%
% interest in math class	74%	50%	70%
n =	108	89	27

The Literacy Demands of the Jobs. The analysis of work related materials indicated that the most important and frequently used reading materials required a minimum of an eighth-grade level to understand them. Mathematics skills required were higher and equated to a ninth-grade level of achievement.

The most important and frequently used reading material among high technology employees measured above an 8th grade difficulty level. These materials constituted the day-to-day materials

used in performing the job. Some less frequent reading material measured a 10th to 12th grade level. Reference material was used less frequently and tended to have a far higher reading level. The employee handbook was infrequently used and reading at a 12th to 13th grade level. The training manual was frequently used, and required a 12th to 13th grade level.
Basic math skills on the job involved addition, subtraction, multiplication and division. Statistical process control also required knowledge of decimals, calculation of averages, means and ranges using positive and negative numbers, knowledge of charts, and the ability to plot graphs.
Most writing involved charting and filling out forms. These tasks are done on an daily basis and are very important to the job. Some forms required a sentence or two of explanation to be written.

Tested Reading and Mathematics Levels Employees were much more likely to have skills that fell below criterion levels in mathematics (32%) than in reading . Table 2 shows the tested reading and mathematics results. Only a small percentage needed help to improve their reading above the standards suggested by an analysis of their jobs. Of 233 workers only 19 (8%) fell below the 9th grade level.

Table 2: Standardized Reading and Mathematics Test Results

Reading test results
4 (2%) tested below 6.0 grade (level only one below 4th)
15 (6%) tested between 6 and 8 grade
18 (8%) tested between 9th or 10th grade level
10 (4%) tested at the 11th or 12 grade level
186 (80%) tested post high school.

Math results
10 (4%)tested at between grades 4 and 5
2 (1%) tested at grade 6
21 (9%) tested at grade 7
23 (10%) tested at grade 8
32 (14%) tested at grade 9
34 (15%) tested at grades 10 or 11
31 (13%) tested at grade 12
80 (34%) tested above grade 12

N=233

The higher proportion of employees needed to improve mathematics is consistent with the findings in the NALS Report on literacy levels of the general population (NALS 1993). The American population has lower mathematics levels than reading. Mathematical literacy, unlike reading skill, erodes if not used.

The actual numbers of workers in need of foundational skill training is in contrast to findings on the literacy level of American adults as a whole. Only 8% of workers needed help with reading, and 24% needed help with mathematics (See table 2 above) . Functional illiteracy in the general population is estimated at between 20% and 30% (NALS 1993), depending on the definition of functional literacy and type of measure used. In the workplace, however, Hart-Landsberg and Reder (1993), found six to eight percent of workers in need of basic skills in a car manufacturing plant in the process of adopting a quality systems approach. It is difficult to make any direct comparisons between this study and theirs due to variations in the type of reading assessment used. Employees in the Landsberg Reder study were asked to read job related materials and judged by their team leaders as needing or not needing improvement. We used a standardized generic reading test and made judgments based on the measured grade levels of the material workers read on the job. We allowed for the estimated advantage experienced workers would have in reading materials they are familiar with. Mikulesky (1994) estimates experienced workers read materials up to two grade levels above their tested reading skill levels because of the familiarity with the concepts and jargon. In addition, the educational levels of the two groups of workers were different. Of the Hart-Landsberg workers, 20% had neither a GED nor high school diploma; all workers in our sample reported graduating from high school. Employees with the lowest skill

levels ended up handing the most dangerous work such as handling toxic waste and were least prepared to handle the reading associated with their job.

Results of the Reading and Mathematics Tutoring Program

Skills improvement was more marked and easier to document in mathematics than in reading. The original recommendation from the basic skills survey was that brush up classes be offered to individuals with reading skills below grade eight and mathematics skills at below grade nine. The original survey showed 42 individuals at this level in mathematics . Nine more individuals were identified at below grade nine and 12 individuals with mathematics skills in the ninth grade were added to the group (total 63). The mathematics class consisted of 13 ninety minute classes for a total of 19.5 hours.

The average grade level pre-test score was grade eight. Post-test scores, ABLE level 3, Form F, equate to a post high school level. Seven participants did not complete post-testing due to illness or unavoidable absences. All employees improved their scores. The final results showed only two employees at below grade eight in mathematics and four below grade nine. Two remained below grade 10. Only two employees did not make significant progress in mathematics as shown by the pre and post tests and remained below grade eight. This lack of progress could be due to either test anxiety or to a math disability.

Some of the dramatic gains can be accounted for by the fact that employees who are out of school a number of years tend to become rusty and forget the math they learned in school. A refresher course quickly brings this knowledge back. It is unlikely that these gains would be sustainable over the long haul. In addition, the standard error measurement on the ABLE, as in all adult tests, is fairly large making gains less easy to assess (Park, 1992). Even so, the gains in mathematics were significant.

Sixteen of 19 employees attended the local technical college for classes in work related reading. The reading class was taught twice a week for periods of 90 minutes over a period of 7 weeks. The length of the class made retesting using standardized tests a problem. As has been noted above the standard error measurement on the ABLE translates into almost one grade level, thus the chance of showing gain in 10.5 hours is small. Also the curriculum taught was entirely work related. The teachers felt gains could be better assessed using a test of work related reading. All 16 participants showed greatly increased mastery of work related instruction sheets. All expressed high levels of satisfaction with the program.

Independent interviews with management and education providers by researchers for NCRVE on completion of the program showed all parties were satisfied with the program (Lewis and Griggs, 1995).

Conclusions/Point of View

The case for workplace mathematics is strong while relatively few workers (8%) needed help in reading. This finding contradicts the conventional wisdom that the need for workplace reading programs is universal. Findings in reading are similar to the Hartsberg Reder study using very different techniques to identify skills-poor workers on a smaller scale. The mathematics findings are new.

Classes in mathematics showed significant improvement in a relatively short time. Research using computer aided instructional delivery of mathematics shows better results with reading than with mathematics in general adult populations. Improving workplace reading skills is a slower process and may be inseparable from a cognitive understanding of the tasks where the reading is used. Gains of less than one grade level were reported for classes in this study. In addition, instrumentation has traditionally been poor. It is no surprise that measuring workplace reading improvement is problematical using standardized tests which tend not to measure what is taught in customized workplace reading programs. Developing work related tests is expensive and the validation process difficult.

Workplace literacy programs are not a panacea. It may be more cost effective to focus on a limited number of areas in terms of skill improvement and to rewrite workplace documents which reach high levels of incomprehensibility. This common sense approach has yet to be

validated by research. Rewritten materials have been introduced into the workplace but data that has not yet been collected related to the overall effect of document improvement on company performance. A method of relating workplace literacy to productivity currently is under discussion.

Finally, the following quote from Carnevale has yet to be validated. "The workplace is changing and so are the skills that employees must have in order to change with it. Many employees, however, do not have the basics essential for acquiring more sophisticated technical skills. While deficiencies in basic skills are not a new problem, they are a growing one. A challenge is emerging from a volatile mix of demographic, economic and technical forces. Combined these forces are driving the nation towards a human capital deficit" (Carnevale, Gainer, Meltzer, 1990).

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Essential Elements of Work: A Factor Analysis of the Occupational Work Ethic

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The occupational work ethic has been quantified as the result of a factor analysis of data from a large sample of industrial employees using the Occupational Work Ethic Inventory (OWEI). This analysis reveals four factors with items that can be used in training programs for instruction in work ethic components. The factors identified were working well with others, striving for advancement/success, being dependable, and unconditional acceptance of duty.

The work ethic is a cultural norm that places a positive moral value on doing a good job and is based on a belief that work has intrinsic value for its own sake (Cherrington, 1980; Quinn, 1983; Yankelovich & Immerwahr, 1984). The work ethic is a secularized construct derived from Weber's (1904, 1905) Protestant work ethic (PWE) theory. The PWE, asserting that Calvinist theology encouraged accumulation of wealth, has been widely used as an explanation for the success of capitalism in Western society. Over the years, however, attitudes and beliefs supporting hard work have blended into the norms of Western culture, and are no longer attributable to a particular religious sect (Lipset, 1990; Rodgers, 1978; Rose, 1985).

Work ethic is an often mentioned attribute employers want their employees to have, but one they often say is hard to find. Boardman (1994) reported the efforts in one community in response to employer complaints that they were "unable to locate employees who were reliable, drug-free, motivated, and possessing a work ethic. Five years later, after establishing programs for technical preparation, apprenticeships, Partners in Education projects, curriculum review, mentoring programs, and employability certification, employers still said they were unable to find a dependable work force.

The work ethic was also identified as a factor that employers were seeking in job applicants in a study by Stevenson and Bowers (1986). Based on interviews with persons involved in hiring for 60 different companies throughout Ohio, positive work attitude was rated as essential by 40 of the 60 respondents and was rated as advantageous by the other 20. Skills of the job, basic mathematics, writing, speaking, reading, computer literacy, people skills, appearance, and personal life skills were also rated, but only *reading*, selected as essential for 43 of the 60 firms, was rated as a more highly valued quality. When a question was framed to ask what was the number one worker quality needed, 32% selected skills on the job and 30% selected positive work attitude. The next highest rating for this item was people skills at 10%.

Of the 60 companies who participated in the study by Stevenson and Bowers (1986), none of them answered yes for positive work attitudes on an item labeled *company will train*. In other areas of preparation for work, if schooling falls short, employers are prepared to provide remediation. In the area of personal qualities, however, industries fail to provide training.

Research-based teaching and career development strategies are needed to strategically target specific qualities to be cultivated. Previous research has identified numerous affective characteristics considered desirable for working people. Beech, Kazanas, Sapko, Sisson, and List (1978) identified 63 affective work competencies considered important by industry and educators and clustered them into 15 categories. Petty (1993), building on the line of research conducted by Kazanas, identified 39 work ethic descriptors and developed the Occupational Work Ethic Inventory (OWEI) based on this work.

The purpose of this study was to identify a short list of focused factors which capture the essence of work ethic. The items generated provide a research based guide for development of

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instructional materials and activities for encouraging and facilitating personal qualities related to work ethic.

Method

Population and Sample The population for this study consisted of workers in public and private businesses and industries in the southeastern United States. Respondents from a broad cross-section of occupations and representative of a full range of ages and work experience were acquired. To effectively identify a sample for the study, a list of 1012 businesses and industries was compiled using industrial directories and area telephone books.

The research design used in this study was ex-post facto with data collected using the survey method. The instrument used to collect data in this study was the Occupational Work Ethic Inventory (OWEI), developed in 1990 by Dr. Gregory C. Petty of the University of Tennessee, Knoxville. Petty (1991) developed the OWEI to provide a concise, but accurate measure of work ethic endorsement by building on extensive prior research related to work ethic. A panel of experts was used to select the list of items included on the instrument and the process followed was similar to one used by Kazanas (1978) in his development of the Affective Work Competencies Inventory and reported by Petty and others (Petty, Kazanas, & Eastman, 1981).

Data Analysis The 50 items contained on the OWEI represent key work ethic and work attitude concepts identified from numerous previous studies. Petty previously developed subscales for the instrument using a content analysis and a panel of experts. Many of the items on the instrument, however, are quite distinct and collapsing the list into manageable groupings was problematic. For purposes of this study, exploratory factor analytic procedures were used to identify the desired explanatory concepts to provide a more objective, statistically based assessment of the items.

To extract the initial factors, a principal-components analysis was used. To eliminate error variance that would be included along with common variance and specific variance at this stage, Kaiser's criterion was applied prior to factor rotation, thus retaining only those factors with an eigenvalue of 1.0 or greater. Factor analysis is a technique for achieving parsimony by identifying the smallest number of descriptive terms to explain the maximum amount of common variance in a correlation matrix (Tinsley & Tinsley, 1987). Orthogonal rotation using a Varimax procedure was employed in this study to maximize parsimony in the final solution. Extracted factors were examined using a content analysis to find the most concise list of items representative of the data collected.

Results

The purpose of this study was to identify a concise list of constructs representative of work ethic as measured by the OWEI. Using squared multiple correlations as the initial communality estimates, principal-components analysis of the data yielded four factors which met the Kaiser's criterion to be retained. To further refine and focus the results, however, orthogonal rotation using a Varimax procedure was used to compute solutions with from 4 to 8 factors. These factor matrices were then examined to determine which was most appropriate to provide a meaningful and concise list of constructs representative of the issues and problems included in the study.

A four-factor solution was suggested by the analysis of data. The factors identified were *working well with others*, *striving for advancement/success*, *being dependable*, and *unconditional acceptance of duty*. Collectively, these factors explained 49 of the 50 items contained on the OWEI and accounted for 19.5% of the total variance. While the ability of a short list of factors was limited in its capacity to embody the meaning of the 50 items on the OWEI, the factors developed provide a practical focus for efforts to assess or influence key work ethic characteristics.

Tables 1 through 4 provide eigenvalues, item means, standard deviations, and the actual items which loaded on each factor. Only those items with a factor loading of .30 or greater were

retained for each of the factors identified. The .30 level is a generally accepted minimum factor loading because it indicates that approximately 10% of the variance for a correspondent variable has been explained by a factor (Tinsley & Tinsley, 1987).

Factor 1. Working well with others. This factor was comprised of items related to interpersonal relationships with other people. The items which loaded here were related to personal characteristics which would facilitate good working relationships and would contribute to job performance in a setting where cooperation was important. One item, stubborn, had a negative loading which met the criteria to be retained. Negative items of this type serve to clarify what the factor is not.

Table 1.

Variable Loadings and Item Means for Factor 1: Working well with others.

Loading	Item Mean	SD	Item
.74068	6.08	.95	courteous
.72589	6.17	.89	friendly
.71149	5.83	.94	pleasant
.68906	5.76	.96	cheerful
.68017	6.01	1.00	considerate
.60499	5.84	1.01	likeable
.60170	6.12	.85	cooperative
.56281	6.12	.90	helpful
.50302	5.91	1.05	devoted
.48762	6.20	.93	loyal
.45423	5.88	1.08	well groomed
.41463	5.22	1.29	patient
.41315	6.09	1.04	appreciative
.36890	6.23	.98	hard working
.32102	5.92	1.12	emotionally stable
-.31844	3.41	1.50	stubborn

Factor 2. Striving for advancement/success. The items which loaded on this factor were descriptive of characteristics which would facilitate "moving up the ladder" on a job and not being satisfied with "status quo" performance. Some of the descriptors which loaded on this factor also encompassed the concept of sticking with a job situation that might not be going smoothly.

Table 2.

Variable Loadings and Item Means for Factor 2: Striving for advancement/success.

Loading	Item Mean	*SD*	Item
.61113	5.50	1.11	perceptive
.55327	4.96	1.33	initiating
.55115	5.75	1.21	ambitious
.53415	5.84	1.01	resourceful
.53054	5.86	1.03	productive
.52442	5.85	.97	effective
.50795	5.77	1.10	efficient
.48981	5.59	1.08	enthusiastic
.47290	5.62	1.16	persistent

.46799	5.94	1.12	dedicated
.44452	5.70	.92	accurate
.43614	5.99	1.05	conscientious
.37291	5.59	1.38	independent
.35297	5.85	1.02	adaptable
.34482	5.19	1.42	persevering
.32611	5.50	1.32	orderly

Factor 3. Being dependable. This factor was made up of items which had to do with fulfilling the expectations and the implicit agreement to perform certain functions at work. The combined meaning involved at least meeting the minimum expectations for satisfactory job performance, but did not necessarily include going "beyond the call of duty."

Table 3.
Variable Loadings and Item Means for Factor 3: Being dependable.

Loading	Item Mean	*SD*	Item
.61377	6.26	.92	following directions
.59319	6.14	.98	following regulations
.57285	6.35	.92	reliable
.56285	6.34	.90	dependable
.47937	6.08	.92	careful
.43073	6.52	.90	honest
.36902	5.79	1.18	punctual

Factor 4. Unconditional acceptance of duty. All of the items which loaded on this factor were stated in the negative on the OWEI. All of the reversed items on the instrument, however, were not included under this factor. Careful analysis of constructs represented by these items showed that they related to the acceptance of job duties and responsibilities. A worker who was characterized by these descriptors would either be derelict of duty or would exhibit only conditional acceptance of the requirements of the job.

Table 4.
Variable Loadings and Item Means for Factor 4: Unconditional acceptance of duty.

Loading	Item Mean	*SD*	Item
.61661	2.24	1.51	hostile
.60314	2.03	1.28	rude
.55391	2.65	1.70	devious
.53205	2.35	1.48	selfish
.50666	2.00	1.43	irresponsible
.50173	2.34	1.47	careless
.46487	2.22	1.52	negligent
.39039	2.84	1.41	depressed
.34719	2.61	1.68	tardy
.31060	3.86	1.90	apathetic

Conclusions

The key constructs of the occupational work ethic as measured by the OWEI reveal important insight into important factors of job success. As with any performance criterion, these factors can be taught. Unfortunately, little evidence exists to support a measured change in behavior as a result in teaching of these performance factors. However, the identification of the factors as demonstrated with this study is an important first step.

With a performance model *factor 1, working well with others*, would be treated by referring to specific human performance factors such as *greets other workers when they first meet.* Or since this factor was comprised of items related to interpersonal relationships with other people, it could relate to *responds cooperatively in team activities*. These items were primarily related to an individual's personal characteristics which would facilitate good working relationships and would contribute to job performance in a setting where cooperation was important. Another performance item would be to *not stubbornly cling to personal idea without compromise.*

The second factor, *striving for advancement/success,* appears to describe performance descriptors of ambition or other personal career development characteristics of human resource development. Human performance factors to consider here would be items such as desires to *move up the ladder* on a job and not being satisfied with *status quo* performance. Some of the descriptors which loaded on this factor also encompassed the concept of sticking with a job situation that might not be going smoothly.

Performance factors to consider with *factor 3, being dependable,* are items which deal with fulfilling the expectations and the implicit agreement to perform certain functions at work. The combined meaning involved at least meeting the minimum expectations for satisfactory job performance, but not necessarily include going "beyond the call of duty."

The fourth performance area, *factor 4, unconditional acceptance of duty,* focused on the negative items of the OWEI. However since all of the reversed items on the instrument were not included under this factor, the items appear to be related to the acceptance of job duties and responsibilities. A worker who was characterized by these descriptors would either be derelict of duty or would exhibit only conditional acceptance of the requirements of the job. Job performance training should focus on the negative impact of a lack of understanding of cooperating with co workers and working as a team member.

Possible implications from this study is the development of strategies for teaching the occupational work ethic. Just as a job analysis reveals components of necessary job skills, this factor analysis of the occupational work ethic reveals necessary work habits, values, and attitudes that should be and could be taught from a performance base, to employees.

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Towards an Ecology of Soul In Work: Implications for Human Resource Development

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An ecology of soul in work involves understanding the deep and holistic relationship between the worker and the work environment. It is about how this relationship is experienced, and the meaning we make of our lives as workers. Within this perspective, HRD practitioners are called to attend to the dynamic, transactional nature of our relationships, and to the unconscious sources of energy within the individual and the collective which animate life within the organization.

Over the last five years, we have witnessed a proliferation of books and articles on matters of spirit and soul in organizational life. Publications such as *Reawakening the spirit in work*, (Hawley, 1993) *Spirit at work* (Conger, 1994), *In the spirit of business* (Roszak, 1992), *The soul of a business* (Chappell, 1993), and *The heart aroused: Poetry and the preservation of the soul in corporate America* (Whyte, 1994) reflect a growing concern with what has come to be called the "spirituality of work." Among the most prominent issues within this discussion relevant to the practice of HRD is the meaning of work in our lives and its organization and structure. As Aktouf (1992) argues, "the human being is, by definition and necessity, a being whose destiny is meaning, intentions, and projects...a subject whose being is meaning and which has need of meaning" (p. 415). A spirituality of work draws our attention to the ways in which individuals *experience* work, its conditions, structure, organization, and its relation to the individual worker. Similar to the socio-technical systems perspective (Ketchum & Trist, 1992), this literature emphasizes the interactive nature of the relationship between worker and context. While this theme is prevalent in much of the recent "reformist" movement in business, a spirituality of work directs us more to matters of soul than strategy and technique.

The idea of soul (Moore, 1991; Sardello, 1992) has become a powerful but dramatically different lens for viewing organizational (Whyte, 1992) and individual life (Sinetar, 1987). Soul invites us within the spaces that make up the interconnections among the work, the workers, and the context or environment, to both the pain of work as well as its joy. Soul is a way of seeing how our inner lives are intimately and inherently joined with the outer context. Grounded in the notion of work as inherently meaningful, the goal of an ecological approach to work is to bridge the gulf between the psychological and the organizational, to see the needs of the individual and the workplace as a continuum, to understand the "inner life" as intimately and deeply connected to and embedded within an "outer life." This perspective implies apprehending our lives as workers far different than the analytic or rational models which dominate much of HRD practice.

The Problem of Meaning in Work

A remarkable number of American workers report feelings of dissatisfaction with what they do for a living (Sinetar, 1987). Laden with the responsibilities of being task-oriented and productive, their lives fill with the needs of every-day life:

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"Everywhere I go it seems people are killing themselves with work, busyness, rushing, caring, and rescuing. Work addiction is a modern epidemic and it is sweeping our land" (Fassel, quoted in Fox, 1994, p. 26). In his study of working men and women, Terkel (1972) vividly portrays how work can and does debilitate the human spirit:

> This book, being about work, is, by its very nature, about violence - to the spirit as well as to the body. It is about ulcers as well as accidents, about shouting matches as well as fist fights, about nervous breakdowns as well as kicking the dog . . . (p. xii)

During a recent blizzard that brought worklife to a standstill on the northeast coast of the United States, a bank worker, playing in and enjoying the snows of New York's Central Park, was asked by a National Public Radio reporter what she would be doing were it not for the blizzard. With a downcast tone in her voice, she bluntly replied "Working...bored to death." When we fail to use our work as fully as possible for our own development, enrichment, and sense of contribution, or when the nature of our work's organization and structure makes such outcomes difficult, we become bored, frustrated, constrained, and dulled by what we do, robbed of energy and satisfaction.. Our co-workers, neighbors, even our own experiences, provide abundant examples of how such frustrations are manifest: inattention to our work, clock watching, absenteeism, use of alcohol or drugs to cope with "work stress," vague feelings of restlessness, irritability, and discontent. Worldwide, managers and workers lament a frightening decline in commitment and loyalty--both in terms of worker loyalty to an organization, and an organization's loyalty to its workers (Kanter, 1991); and workers increasingly see their work as a never-ending struggling demanding they prove their worth constantly lest their names be on the next batch of pink slips (McKnight, 1984). Organizations tend to focus on behavioristic strategies to repair or correct what are generally seen as "worker problems." Such attempts can be readily seen in the pervasive use of such programs and strategies as work redesign, performance management systems, or re-engineering. Though the long-term effects of such efforts remain to be seen, evidence suggests these efforts often produce heightened levels of anxiety, tension, depression, anger, and fatigue among workers (Ketchum & Trist, 1992).

Work can, and too often does, serve as a force of alienation and dehumanization in one's life (Aktouf, 1992; Hawley, 1993; Ketchum & Trist, 1992; Terkel, 1972). For many, work is seen as meaningless and often boring or dreadful, and workers gradually slip into a sense of "self-estrangement" (Aktouf, 1992). Aktouf argues that "Alienation from work is the heart of the problem of workers' commitment and motivation" (p. 418), a theme echoed by more "mainstream" theorists such as Ketchum and Trist (1992) and others. Even within HRD, typically perceived as the organizational domain most concerned with the "human issues," we encourage this sense of alienation by viewing the organization as an inanimate form, a mechanistic system involving the input, transformation, and output of resources and human capital. Not surprisingly, then, individuals attempt to find meaning for themselves apart from their work, to value work primarily as a means to live. Increased work means increased purchasing power, resulting in what Fassel (1990) refers to as the "overworked American." Rather than indicating a sense of loyalty or commitment to one's work, this reflects a need to derive meaning from consuming and not from one's work--creating a lifestyle, rather than creating a life.

At one level, this problem of meaning in work could be considered a psychological issue, involving personal choice and personal decisions concerning what we will make of our lives, and not especially relevant to organizational or HRD concerns. There is evidence, however, that this is but one dimension, and that the ways in which we are socialized and culturalized in specific groups also impacts the outward expression of our inner lives. The problem of meaning in work extends beyond the psychological and is clearly linked to the ways in which work is structured and organized. Ketchum and Trist (1992) argue that "Commitment to work is still central to people's lives, but the commitment is conditional on the work experience" (p. 14-15).

Some managers are beginning to view such phenomena as poor work quality, lack of commitment, "Monday blues," or increased workplace violence as manifestations of a workforce which fails to view work as a vital component of their lives. They have implemented a number of strategies to address these concerns, including participatory management techniques such as self-management teams and total quality improvement efforts. Within these efforts continues to lie the

assumption that people are not, in and of themselves, motivated to work, and that systems and controls must be implemented in order for people to work productively. Aktouf (1992) raises a critical, and often overlooked, consideration: rather than this technical focus on learning "how" to motivate workers, he asks whether it wouldn't be better to spend time understanding "why" the worker is so little motivated. As he points out, "to raise the question in this way . . . is to question the very meaning of work" (p. 420).

Work as Right Livelihood

Work as right livelihood is an ecological view of work incorporating the contexts and processes of work, its structure and organization, as well as the psychology of the individual worker (Csikszentmihalyi, 1990; Fox, 1994). Such assumptions are embedded within existing frameworks of HRD such as self-directed work teams, job enrichment, and organizational democracy (Bolman & Deal, 1991); companies experimenting with radical restructuring (Aktouf, 1992; Galen & West, 1995; Semler, 1993); organizational transformation (Adams, 1984; Fletcher, 1990; Handy, 1994; Ketchum & Trist, 1992); and the literature on a spirituality of work (Bolman & Deal, 1995; Chappel, 1993; Conger, 1994; Hawley, 1993; Roskind, 1992). A number of organizations recognize the need to attend to issues of meaning and how workers experience work, and we are witnessing an emerging emphasis on the uncovering of a vital workforce, a workforce that works and creates with a spark of fire (see for example Galen & West, 1995). At one time, and even continuing in many sectors today, one's work was considered an expression of one's spiritual life, carefully chosen, with skills and craft cultivated and nurtured over a lifetime. Work as vocation, or calling, was seen as our demonstration of commitment to community and to the welfare of others. As the outer expression of our inner lives, work was often viewed as the central domain for one's human development (Welton, 1991). These attributes characterize work as right livelihood, a notion at the center of a spirituality of work. In this view, work is a vital component of the human experience, laying important building blocks for one's sense of self.

Work as right livelihood conveys a particular relation of our selves to our work, and reflects a deep, inner capacity to see meaning in what we do, to approach our work as an expression of our inner self. It is about making our work an end in itself, rather than a means to an end (Corson, 1991; Hawley, 1993; Sinetar, 1987). This "way of being" at work moves us towards our fullest participation in life, and embodies self-expression, commitment, mindfulness, and conscious choice (Fox, 1994; Hawley, 1993; McKnight, 1984; Sinetar, 1987). Right work responds to an essential human need: to be a part of something larger than oneself, to feel connected with others, to feel needed and valued. Having a sense of a transcendent purpose--one that goes beyond oneself--provides us with a source of enthusiasm, energy, and goal (McKnight, 1984). This is the essence of soul in work. In contrast, work without meaning is characterized as tired, ego-centered, competitive, manipulative, and cynical. The ways in which a company frames the nature of work and the role of the worker severely limits the extent to which we can bridge the inner life of the worker and the outer life of the organization. When we seek to develop and motivate the work force, to put life back into our lives--to work with soul--we are searching for a source of vitality. The dynamic and interactive nature of the relationship between worker and work demands that we attend not only to strategies for increased production and quality, but to the ways in which we work--the ways in which we experience and make meaning of our work and of our selves as workers. To fully achieve this paradigmatic shift becomes a matter of developing an ecology of soul in work.

Honoring the Soul in Work

Facing the workplace and our work with soul is reflected, to greater or lesser degrees, in a number of conceptual and ideological focuses within existing organizational development literature. Each of these efforts contribute to an overall understanding of soul in work. For purposes of discussion,

we refer to these efforts as humanist reforms, radical humanism, and the spirituality of work movement.

Humanist Reform Efforts One of the most popular and pervasive attempts to address the problem of meaning in work has been the introduction of management techniques and strategies based on the "Deming" philosophy (Deming, 1982). In essence, Deming's quality management ideas were a comprehensive approach to employee spirit and involvement. Many of his 14 management points reflect both a humanist influence and a response to the problem of meaning in work, including a constancy of effort, the transformation of Western-style management, a critical eye towards one's work, the driving out of fear, and the removal of barriers that rob workers of pride in workmanship. Deming's approach emphasized participatory management styles and numerous human resource innovations; the heart of his philosophies for continuous quality improvement rested on the premise that organizational structures and procedures must appeal to workers' talents, pride, and innate desires to work together, to cooperate, collaborate, and to create.

Characteristics of a humanist perspective include, but are not limited to, less worker constraint, enhanced self-control over one's work, an environment of trust conducive to risk-taking, increased autonomy and responsibility, and the valuing of intuition, creativity, and emotion (see for example Bolman & Deal, 1991; Bowen & Lawler, 1992; Larkin, 1986). Tenants of quality improvement rest on the need to drive fear out of the organization, constancy of purpose, commitment to a common vision, and the breaking down of structural barriers while affirming the diversity and value of individual contributions. Such attributes are also seen in Senge's (1990) sense of the "learning organization," one which cultivates human capacity through valuing personal mastery, vision, and dialogue. Additional organizational theories and management models (as seen in Bolman & Deal, 1991) reflect similar ideas, such as McGregor's assumptions of human nature and need for participative management, Maslow's recognition of the need for self-esteem and self-actualization, and DeVanna and Tichy's concern for facility size, use of work groups, high levels of interaction with others, integrated diversity, and democratic processes. Many organizations, however, have ignored the philosophical orientation that Deming and other humanists advanced, turning philosophy into technique and strategy and implementing them piecemeal within an organization. Such a cafeteria approach to organizational development appears to have done little to reduce feelings of meaninglessness and discontent among workers (Galen & West, 1995; Ketchum & Trist, 1992), and employees are often suspicious of techniques such as "self-management teams" and "total quality improvement" efforts.

Thus, the humanist reform efforts have consisted of a number of well-intended efforts to address problems of meaning and other related organizational concerns. Despite the call for a thorough reassessment of traditional views of work and the workplace, many "apparently have not seen the need to review the basic conceptual and ideological foundations on which these practices are based" (Aktouf, 1992, p. 408). The behavior of people continues to be viewed as the source of workplace problems (Fox, 1994; Handy, 1994; Hawley, 1993; Ketchum & Trist, 1992). Characteristically, we are tempted to isolate these symptoms as individual problems and eradicate them one by one. This manner of thinking has led to such interventions as the need for motivational programs, the construction of surveillance systems, and the use of penalties and bonuses to discipline or reward.

Radical Humanism Radical humanists seem to have a better sense of the overriding philosophy needed for a revitalized workforce, and perhaps are more in keeping with a sense of soul in work. Drawing from Aktouf's (1992) work with radical humanism, attributes which characterize this effort include a view of humans as being endowed with consciousness, right judgment, and free will; the idea that humans are fundamentally defined by our community and relations with others, who help us shape our sense of self; and that "the heart of the process of dehumanizing 'man' is alienation through work. This idea explains the primordial importance of what takes place, concretely, in the work process" (p. 414).

The more radical perspective advocates the abandonment of management based on authority or on the scientism that is pervasive in the organizational field such as Taylorism, behavioral sciences, or management information systems. Only in this way will we begin to

conceive of practices that permit the development of the worker's desire to belong, to contribute, and to use his or her intelligence and creativity in the service of others. Radical humanists believe such goals can never be achieved so long as the conception and treatment of the worker as an instrument of production, as a "needs-driven mechanism," as a resource to be exploited and monitored, or as a cost to be controlled and minimized, prevails (Aktouf, 1992, p. 411). The humanized firm focuses on the person more holistically, people who are driven by the desire to cooperate and to contribute, who will know how--and be allowed--to think, to react, and to modify, and who are characterized by greater autonomy, and equity. Such changes must be a "lived experience," neither contrived nor commanded, and must involve a change in the rules and the nature of power and control, rather than a change of technique.

The radical humanist perspective illuminates the need for paradigmatic change in the ways in which we think about work and its meaning, due to inherent and inevitable conflicts between capital and labor. The spirituality of work literature, however, seems to subsume these views of both the humanist and radical humanist, but also serves to further illuminate the problem of meaning through its emphasis on the soul of organizational and worklife.

A Spirituality of Work Unlike a prevailing tendency to locate problems of meaning or performance within individual workers, the emerging spirituality of work literature suggests that commitment to work depends as much on the way work is experienced as it does on the individual worker. Spirit and meaningfulness cannot thrive in an environment that induces anxiety and encourages reactiveness rather than proactiveness. Some organizations are recognizing this need to attend to the more spiritual dimensions of worklife. In a recent ***Business Week*** article, Galen and West (1995) described companies turning inward in search of a "soul" as a way to foster creativity and motivate leaders. These companies identify how, as a result of downsizings and reingineering, over-worked employees are asking, What does all this mean? Why do I feel so unfulfilled? With this heightened awareness of issues of meaning, there is an emerging emphasis placed on matters of the soul and spirit in organizational life--in the uncovering of a vital workforce capable of continuous adaptation and innovation.

The literature on spirituality of work contributes to our understanding of the need for a "new order" of thinking about work and its organization. However, as De Gaulejac suggests, "Today it is as if the 'new managements' were trying to transform the psychic drives feeding the individual's narcissism into added work and an additional source of surplus value" (quoted in Aktouf, 1992). In other words, this remarkable attention to a spirituality of work is sometimes justified in terms of "value added," denying the very soul that is struggling to survive within the workplace. Rather than seeing the problem as one of soul, many interpret this new emphasis on spirituality as one which suggests new "techniques." Thus, much of the attention to the spirituality of work continues to reflect a preoccupation with strategies rather than the need for a fundamentally different way of thinking about the meaning of work and how this meaning is reflected in organizational structures and processes.

Towards an Ecology of Soul in Work

An ecology of soul in work seeks to provide a framework for honoring the soul, to "arouse the soul," in work. Like the finger of the third ghost in *A Christmas Carol*, the growing concern with spirituality and meaning in our work and in the workplace points imperatively not to new value added techniques or strategies, but to matters of soul. Building on Aktouf's call for a radical humanism in the workplace, we argue that concern for soul in work beckons us to a "new order," a fundamental shift in how we understand the meaning of work in our lives. While Aktouf's analysis significantly contributes to our understanding of the problem of individual meaning in work, soul directs us to the importance of both the inner and the outer aspects of work, and to its collective as well as its individual dimensions (Fox, 1994). In an ecology of soul perspective, we "cease to understand or see ourselves as isolated and narrow competing egos and begin to identify with other humans....and...beyond humanity to include the nonhuman world" (Naess, 1985, p. 67).

Viewing work from this perspective places primacy within the workplace on development and growth of both the individual and community.

The ideas of such writers as Fox (1994), Moore (1991), or the poet spiritualists such as David Whyte (1994) describe that to work with soul challenges the status quo of the Western world. It demands an inner strength and is founded upon ideas of community and connectedness with others. An ecology of soul recognizes and values the interconnection between the quality of the inner work and the outer work we do, an expressed joy in work, and the drive and opportunity to work authentically and with mutual respect. Hallmarks of working with soul include the use of self-organizing systems, the opportunity to work with spontaneity and freedom, and to be treated with life-affirming dignity. There is a need for face-to-face communication, participatory processes, and the opportunity to foster meaningful interpersonal relationships. Both research and anecdotal evidence indicate that worklife is often filled with considerable emotional discomfort and psychic pain, as well as sheer physical pain, and an ecology of soul does not assume the complete elimination of such pain and conflict. Rather, an ecology of soul seeks what to do *with the pain*, unlike most HRD trends which seek to do *something about* pain and discomfort in work. According to Sardello (1992), "political, social, economic, ecological, and technological programs will not alter the condition of the world one wit; they only rearrange what is already given into new patterns" (p. 9). Such a "rearrangement" implies a need for individuals to do their own inner work, to nurture deep meaning with respect to how we direct our energy, but also for business to cultivate an inward organizational consciousness in an environment of openness, safety, and trust.

Implications for HRD Practice

Key concerns for today's leaders are no longer simply issues of task and structure but are issues of spirit and soul (Hawley, 1993). This is not to suggest that issues of productivity, structure, and profits, are no longer critical, but rather that we concern ourselves more fully with the humanness and health of our organizations (1993). Is this unrealistic in the "hard" world of work? Growing evidence from the business world suggests not. Voices of companies embracing spirit and soul within the workplace are rising as a growing number of workplaces begin to understand the importance of the context of work and how workers experience and make meaning of their lives as workers. Examples of such places include international organizations such as Semco (Semler, 1993) and Sun Hydraulics Corporation (Kaftan & Barnes, 1991), the Quebec pulp and paper multinational, Cascades, Inc., and the American plant, Johnsonville Sausage Company (Aktouf, 1992). Other workplaces are also beginning to "experiment" with new work environments that openly speak of soul, such as Boeing, AT&T, Lotus Development, and Medtronic (Galen & West, 1995). Outcomes of such experiments are variable, and critics of course abound. Yet it appears that an ecology of soul is possible, a workplace can promote high productivity as well as transcendent values, and human resource personnel can work to develop people by helping them find transcendent meaning in their work.

We are perhaps not so far from developing an ecology of soul in work as some might think. Similar characteristics are already evident in existing organizational development literature, where changing the status quo demands a more critical and holistic perspective. Senge suggests that we adopt a more Gestalt perspective, in contrast to the analytic and reductionist perspectives that predominate the field, and locate work within contexts that extend beyond the immediacy of the balance sheet and the needs and characteristics of the physical plant. Organizational transformation is also reflects this desire to move beyond the constraints of highly technical interpretations of how workplaces are structured and organized. Adams (1984) stresses the multiple perspectives and interconnectedness within a new paradigm which emphasizes an "expanded sense of personal identity and an awareness of the interconnectedness of people in their organizational cultures, and of organizational cultures to each other in the larger environment (p. vi).

Ketchum and Trist suggest that attention needs to be given to attending to and changing the ways in which workers experience work, rather than trying to re-shape or replace workers

themselves. This line of thinking leads to considerations of the nature of work that engenders commitment among employees. Work can provide a means of allowing the varied and complex aspects of our personality to emerge and flourish. Working with soul reflects energy, transcending the ego, cooperation, freedom, and joyfulness, and demands an environment free from fear, guilt, and the perpetuation of self-defeating thought patterns. It involves a total belief system that emphasizes responsibility, accountability, and connectedness--a sense that each worker is an integral part of something larger than him or herself (Fox, 1994; Hawley, 1993; McKnight, 1984; Sinetar, 1987). It means ridding ourselves of the idea that organized groups of people are pieces of property, to be bought and sold according to market price, and as costs and constraints which we instinctively seek to reduce (Handy, 1994).

HRD has long recognized the workplace as a context for fostering worker growth and development, and to enhance organizational effectiveness through the integration of structural, human, and strategic issues and practice. Because of a practice focused on the inter- and intra-unit relationships within an organization, HRD practitioners are well-positioned to cultivate an ecology of soul in work, to become more conscious of the inner lives of our organizations and how workers experience their lives as workers. Moving towards an ecology of soul, we must begin to view the work organization for what it is--a human collective with human characteristics--and tie the organization closer to the human condition, subject to the principles of human existence. Only then can we cultivate an organizational form where candor, symmetry, equity, and sharing provide the grounds for humanizing the workplace (Aktouf, 1992, p. 424).

Conclusion

Meeting the challenges that face the workplace today depends upon the involvement of the many, a fully integrated organization, increased experimentation, the elimination of boundaries, and the free-flowing exchange of communication, information, and knowledge (see for example Aktouf, 1992; Bowen & Lawler, 1992; Larkin, 1986). Cultivating an ecology of soul will assist HRD practitioners to navigate in the face of environmental uncertainty and enhance an organization's ability to absorb change.

Numerous forces are influencing the direction of HRD, including heightened expectations by organizations of workers for decision-making, creativity, risk taking, and adaptation to change, and higher expectations by workers for meaningful work and the right to fully participate in shaping work processes and outcomes (see for example Carnevale, 1991). Rather than continuing our more traditional efforts to eliminate symptoms of meaninglessness in work, what is needed is greater dialogue concerning how to assist organizations to evolve in a way that honors imagination and creativity, personal and collective challenge, and other multifaceted dimensions of an ecology of soul. At its heart, this implies new ways of nurturing organizational development and culture. Before such dialogue can result in any meaningful and practical accomplishment, however, we must increase our understanding of what contributes to a sense of meaningfulness in our work. Certain conditions are necessary to infuse work with soul, to allow an ecology of soul to emerge within our workplaces. To some extent these conditions are illuminated within the spirituality of work and organizational development literature. There is a need, however, to further assess the structures and processes within the workplace that enhance personal growth and development, encourage cooperative and democratic work, that eliminate fear in the worker, and communicate messages that value our intrinsic natures.

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A Mentoring Model For Career Development

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This study focused on creating a mentoring model for career development in organizations. Using a developmental approach, a mentoring model was formulated by identifying relevant components from the fields of adult learning, social learning, training and development, work motivation, career development, and developmental psychology. The model was based on the assumption that mentoring is an essential tool for career development and beneficial to the organization, the mentor, and the protégé.

The human resource development (HRD) field has recognized that dramatic changes such as global competition, technological advancements, and mergers require that employees continually learn new ways to adapt to transformation in both technology and organizational culture (Johnson & Packer, 1980; Fombrun, C. J., Tichy, N. M., & Devanna, M. A., 1984; Hall, 1986). These changes have also forced organizations to flatten its structures necessitating that more aggressive, but mutual, career planning be undertaken by the individual and the organization (Hall, 1986). To deal with these changes, Kram (1992) offered that mentoring programs could provide career development assistance as well as help employees acquire technological and interpersonal skills. Kram (1992) believed that an important need would be filled if the quality and availability of mentoring programs were improved.

The numerous benefits of mentoring have been touted by educational, professional, and corporate consultants. These benefits have included: increasing the individual's ability to learn new skills and effectively meet the challenges of successive life and career stages (Hall, 1976, Schein, 1978; Dalton et al., 1977), assisting organizational change efforts (Zagumny, 1993); and enhancing mentors' careers (Burrus, 1988). However, mentoring has identified specific roles for different disciplines. For instance, psychology uses mentoring to "support and facilitate the realization of the dream" (Levinson, Carrow, Klein, Levinson, & McKee, 1978, p. 98) while education uses mentoring as a retention and enrichment strategy (Kram, 1985). These diverse roles have made it difficult for organizations to develop and implement a mentoring program. Yet when mentoring is implemented, most programs are not formerly written. To create a written mentoring model for career development, this paper used a developmental approach to select the relevant concepts from the fields of adult learning, social learning, training and development, work motivation, career development, and developmental psychology

This mentoring model assumed mentoring to be an important source of development at every career stage as it assists both the mentor and protégé build new skills, prepare for advancement, and adapt to a changing environment (Kram, 1992). This mentoring model was developed for aspiring adults in organizations and limited to veteran employees and their relationships with less experienced employees.

Section II A Review of Literature For Common Elements

Method of Research A developmental approach was used to describe the mentoring concept systematically, factually and accurately. The relevant literature from the fields of adult learning theory, training and development, career development, social learning theory, developmental psychology, and work motivation were analyzed for content and synthesized into the necessary components for the mentoring model.

This section identified the common mentoring concepts in each field to formulate the mentoring model.

Adult Learning To understand the mentoring relationship, a familiarity with adult learning theory is necessary. Two popular theories of adult learning are based in adult life situations. The first, the theory of margin (McCluskey, 1970), describes adulthood as a time of growth and change in which

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individuals constantly seek balance between the amount of energy required and the amount available. The second, proficiency theory (Knox, (1980), assumes that adult learning is developmental and transactional. That is, learning is essential to the changes adults experience as they age. Deficiency between current and desired level of proficiency explains adult motivation and achievement in learning.

The second category of adult learning, adult characteristics, is found in Knowles' (1984) theory of andragogy. According to Merriam (1984), andragogy is one of the best theoretical links between adult development and learning because it is founded on the premise that adults are self-directed beings who are products of an accumulation of unique and personal experiences and whose desire to learn comes from a need to confront the tasks encountered during the course of development. Andragogy (Knowles, 1984) is based on five assumptions about adult learners. They include (1) As a person matures his or her self-concept shifts from dependency toward self-direction, (2) An adult accumulates a increasing reservoir of experience which is a rich resource for learning, (3) The readiness of an adult to learn is closely related to the developmental tasks of his or her social role, (4) There is a change in time perspective as people mature, from that of future application of knowledge to immediacy of application, and (5) Adult learners are intrinsically motivated.

Androgyny has provided adult educators with implications for design, implementation, and evaluation of learning activities. The impact of this theory extends from giving adult educators a "badge of identity" to changing the role of the learner in adult education and HRD (Bard, 1984).

Adult Training A popular and systematic method of applied training is based on the United States military work on Instructional Systems Design (ISD). A variety of ISD programs (e.g., Campbell's Training Design Model, Briggs Model) have been developed over the years and all have included five steps: analysis of the job or task requirements needed for optimal work performance; the selection of instructional methods and strategies based on the trainees characteristics and abilities; the development of the materials needed for the instruction; the implementation of training; and the evaluation of the training (Carnevale, 1990). Carnevale (1990) maintained that when learning experiences are based on job needs, employees are motivated to improve their proficiency in the expectation that positive outcomes (i.e., promotions, better pay) will result.

Since, andragogy posits that adults are motivated by problem-oriented learning and self-direction (Knowles, 1980), an andragogical-based ISD program would urge the trainees to participate in all five phases of the program. Thus, the trainees would not only help create the training objectives but they would help to evaluate the training (Laird, 1985).

It was noted in the adult learning and training literature that a comprehension of adult learning theory and adult development is necessary for both instruction and program development. Adult educators must understand career development stages, the interrelationship of adult development and career development, and the counseling techniques for use with those in transition. For program designs, educators must take into account the developmental tasks for adults (Kummerow, Sillers, & Hummel 1978).

Career Development and Development Careers were seen as a once and a lifetime event until Super (1953) and Ginzberg (1951) argued that career choices and career development could be viewed as hierarchical, sequential, and qualitatively different stages. Dalton et al. (1977) took over for Ginzberg and Super and described what happens to individuals after their initial occupational choices are made. Although they would progress through stages faster than previously, Dalton et al. (1977) believed that when individuals change careers they must progress through all the stages again.

Hall (1968) studied how issues of identity and psychological success are related over time. He discovered a psychological success cycle. This cycle poses that if individuals set high goals, they are more likely to exert a high level of effort directed toward the goal than if no goal had existed. Success at achieving the goals create feelings of intrinsic satisfaction which enhance self-esteem and lead to a more competent identity. Consequently, the individuals involvement in work raise their aspirations for future goals.

More recently, Hall (1986) identified that the flattening of organizations has changed the nature of career planning by urging employees to be more self-reliant and forcing organizations to link their human resource strategies to their business goals. To deal with these changes, Hall (1986) developed the role of assignment manager. This role is to provide qualified candidates for organizational jobs and to serve

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as a source of information between the individual and organization. Here, the career expectations of the individual are integrated with organizational requirements and restraints.

Career Development and Social Learning Krumboltz (1979) developed a career decision making theory that is an extension of Bandura's (1977) social learning theory. Krumboltz (1979) identified the tools for learning as positive verbal reinforcement, success and mastery experiences, and appropriate role models. He identified four category of influences for career decision making: genetic endowments, environmental conditions, task approach skills, and learning experiences. He also suggested that there were three outcomes of these influences. These include that (1) The individual develops self-observation generalizations resulting from past learning experiences, (2) The individual develops task approach skills and feels he/she does or does not have an impact on the environment, and (3) The individual enters or does not enter an occupation.

Schein (1982) noted that organizations have become more concerned with the development of their human resources due to an increase in technology. He noted that managers must be concerned with how to provide optimal challenges to employees. Optimal challenge is a set of activities that are not too difficult, too easy, too meaningless or too risky. This idea is supported by social learning theory which poses that if a job is too easy, too difficult, or meaningless it will not produce the reinforcing results and employees will discontinue their performance. If the job is too difficult or too risky, employees will get too anxious and develop generalizations that inhibit future performance and learning (Krumboltz & Williams, 1990).

From a content analysis of the career development models, the individual, as well as the organization, is perceived as perpetually changing. Employees' life cycles correspond with changing needs and changing motivations. Mentors may assist employees by assessing their capabilities and needs and match them with the organizations' resources and goals. Mentors can also provide the opportunities for employees to vicariously learn specific behaviors and skills.

Work Motivation The initial work motivation studies are founded in the scientific management principles that posited that money was a primary incentive. More recently, motivation from a growth and development perspective, perceived individuals as being motivated by higher level needs (i.e., self-actualization, achievement). It was Maslow (1943) who placed individual's needs in a hierarchy. Once individuals satisfy a level in the hierarchy, that level no longer motivates them. The five levels of Maslow's (1949) hierarchy of needs are (1) Physiological needs, (2) Safety needs, (3) Love needs, (4) Esteem needs, and (5) Self-actualization needs.

Although Maslow's hierarchy was not directly intended for work motivation, it had a tremendous impact on management's approach to motivation. Luthans (1995) used a content model of work motivation based on Maslow's hierarchy that focused on managers attempts to provide opportunities for employees to fulfill their needs and move higher up the hierarchy. In addition, managers must realize that employees are at different hierarchical levels and therefore motivational strategies may vary from individual to individual.

Herzberg's two-factor theory of motivation (1968) is similar to Maslow's need hierarchy. Before Herzberg's theory, management attempted to provide satisfactory pay, benefits, and working conditions to motivate employees. However, not all employees were motivated by these factors. Herzberg identified two factors for motivation, job satisfiers as motivators and job dissatisfiers as hygiene factors. Hygiene factors include company policy, supervision, salary, interpersonal relations, and working conditions. These factors prevent dissatisfaction and are related to Maslow's lower level needs. Motivating factors are achievement, recognition, work itself, responsibility and advancement. They are similar to Maslow's higher order needs. Herzberg's theory explained that hygiene factors are not motivators.

Another key contribution to work motivation theory is Porter and Lawler's (1975) motivation model. These researchers believed satisfaction is determined by rewards after performance. They recommended that managers go beyond the traditional attitudinal measures and determine the value of possible rewards, the perceptions of effort-reward probabilities, and role perceptions.

Formalized Mentoring Models McKeen And Burke (1989) identified certain factors critical to effective mentoring programs. They include: well defined program goals supported by all management levels, training and development to foster awareness and clarity of mentoring, modification of

organizational structures (e.g., reward systems, performance appraisal systems) designed to encourage desired behavior, selection and matching volunteer mentors and protégés, and continual and timely feedback. McKeen and Burke (1989) concluded that effective planning and support of these conditions will enhance the success of mentoring for career development.

Kram (1984) also described prerequisites for an effective mentoring process. They include: frequent and honest communication, interpersonal skills as well as the willingness to build supportive relationships, and a reward system built around management practices that value the mentoring program.

A review of the literature suggested that mentoring programs promote personal development and career advancement of protégés in the organization by supplying role models, challenging assignments, guidance, counseling and exposure to top management (Burke, 1984; Phillips-Jones, 1982, 1983; Roche, 1979). A content analysis of the literature revealed certain core components of a successful mentoring program. They were (1) Top management supported the mentoring program, (2) The mentoring program was a part of the career development program, (3) There was voluntary participation by the mentor and protégé, (4) There was training for the acquisition of skills, knowledge and support for all participants of the mentoring program, (5) A selection and matching process for each mentor relationship was used, (6) A monitoring and evaluation process that determined how objectives are achieved and how the program might be strengthened was implemented, (7) A coordinator, usually from a human resource function, was appointed, (8) Frequent interaction between mentor and protégé was planned, and (9) Successful mentors were acknowledged and rewarded.

Since most organizational mentoring programs are philosophical rather than written (Kram, 1987), the literature indicated that a formal mentoring model needed to be designed (Phillips-Jones, 1983)

From a content analysis of the fields researched, common elements were identified to be relevant for the mentoring model (see Figure 1).

	FIELDS					
ELEMENTS	*career development*	*adult learning*	*developmental psychology*	*social learning*	*work motivation*	*training & development*
career stages	x	x	x		x	x
change	x	x	x	x	x	x
challenge	x	x	x	x	x	x
application-immediacy	x	x	x	x		x
self-direction	x	x	x			x
self-assessment	x	x				x
relevance	x	x	x	x	x	x
feedback	x	x	x	x	x	x
recognition	x	x	x	x	x	x
individual differences	x	x		x	x	x
environment	x	x	x	x	x	x
collaboration	x	x			x	x

Figure 1 Common Elements for the Mentoring Model

Section III The Core Components of the Mentoring Model

After the best strategies used in training and mentoring were synthesized, essential elements for the model were chosen from the various fields. The following section discussed these elements.

Career Development A central theme for current career development, as well as for the mentoring model, is the simultaneous process of the employee planning his/her career in a personally satisfying and productive manner and the organization selecting, assessing, assigning, and developing qualified employees to meet its future needs (Hall, 1986). The mentor model used Hall's (1985) requirements for linking career planning and career management. The model specifies that the mentor be a source of information for potential organizational job openings, serve as a buffer between the individual and the

organization, integrate the organizational constraints with the protégé's aspirations and needs, and provide realistic information regarding career opportunities in the organization.

Adult Learning The principles of andragogy (Knowles, 1984) were used for the mentoring model. The first principle, self-directed learning, required that the learners have direct responsibility for planning, carrying out, and evaluating their learning experiences. Mutual trust, mutual career plan development, and mutual evaluation of the mentoring program were specific conditions identified for the mentoring model that fostered self-directed learning.

The second component used from adult learning theory was that adults have a rich reservoir of knowledge that can serve as a source for learning (Knowles, 1984). The mentoring model provided a diverse number of experiences (e.g., group discussions, simulations, team building exercises) and opportunities for job rotations.

The third relevant component for the model deals with adult readiness (Knowles, 1984). The adult must learn specific tasks or skills before moving to the next developmental stage. Thus, the mentor model specified that the protégé identify learning circumstances that are applicable and relevant. The protégé must be willing to communicate whether he or she is prepared for the next learning experience.

The fourth ingredient for the mentoring model is founded on the notion that when adults mature their interests in learning for application increases. They are inclined to have a problem-centered orientation rather than a subject matter orientation. The mentoring model called for the assessment of protégé's current skills and abilities and then provided a career plan to address the strengths and weaknesses. The protégé was given the opportunity to use his/her newly learned skills soon after training.

The final element in adult learning theory that is relevant for the mentoring model is that adults are motivated to learn by internal rather than external factors (Knowles, 1984). In order to provide for this, the model called for the mentor to give the protégé room to explore. Mistakes were perceived as valuable developmental experiences.

Training and Development Through a content analysis of the training and development literature, an ISD process which fostered self-directed learning and encouraged collaboration was recognized as a best training practice. The essential components of this training practice selected for the mentoring model were (1) The protégé and mentor mutually assessed and analyzed the protégé's skills in conjunction with the protégé's desired career goals while objectives were mutually developed, (2) Mentors aligned the career development plan with the necessary learning methods (e.g., lectures, meetings) specified by the protégé, (3) Both the protégé and mentor designed the career development path by sequencing the protégé's learning experiences, (4) The mentor gave the protégé access to situations in which the protégé could apply the learning, and (5) Both the protégé and mentor evaluated the mentoring relationship according to the initial mentoring objectives. The objectives were reexamined in light of the evaluation.

For training and development, the focus for the mentoring model was on the five phases of the ISD process. This process required the collaboration of the mentor and the protégé in every stage of the mentoring relationship.

Social Learning Theory The relevant components for the mentoring model gleaned from social learning theory are based on Bandura's (1986) belief that learning is accomplished by enactive or observational learning. Enactive learning involves direct experience while observational learning involves observing and imitating another's behaviors and consequences. Both types of learning require making sense out of the relationship between behavior and results so that the learner can understand the rules that govern appropriate behavior and avoid unproductive trial and error leaning (Bandura, 1977).

Social learning is relevant for the mentoring model. The protégé was frequently placed in position to observe skills and behaviors that he or she needed. It was essential that the mentor possessed the ideal behaviors and skills or provided opportunities for the protégé to observe them.

Since individuals can learn through rule-governed behavior (Bandura, 1977), they do not have to be personally rewarded or punished. They can learn by listening and observing others. Thus, for this mentoring model it was necessary that mentors provide protégés with opportunities to witness different behaviors.

Social learning theory specifies that reinforcement be continual. The organization must reinforce the protégés new skills and behaviors through its structure and programs. In order to learn, the protégé

must see that the behavior and skills learned will be consistently rewarded, otherwise he/she will not use them. Therefore, the mentoring model called for an assessment of the present organizational practices (e.g., performance reviews) to determine those that were inconsistent with the mentoring programs. Practices that reinforce the mentoring process were to be developed.

The last relevant social learning element for the model was to maintain maximum performance by providing challenging experiences (Mitchell & Krumboltz, 1990). Protégés were to be given "optimal challenges" (Schein, 1982) that were suited to their levels of difficulty and risk.

Developmental Psychology Levinson et al. (1978) and Erikson (1968) used life and career stages to explain that people confront day to day problems related to growing older. The career and life stages are distinct and are related to age, social expectation and roles. Individuals move from one life stage to the next by successfully coping with specific tasks. Similarly, Kram (1985) identified two types of functions provided by the mentoring relationship that enable people to move along career stages. The mentor model used these two functions.

Career functions include sponsorship, exposure-visibility, coaching, protection, and challenging assignments. The psychosocial functions include role modeling, acceptance and confirmation, counseling and friendship. Kram (1985) noted that the greater number of functions provided, the more outcomes of the mentoring relationship.

The mentoring model considered the career stages of both the protégé and the mentor and matches them accordingly. In addition, the mentor received the necessary training to be competent at both career and psychosocial functions.

Motivation The mentoring model is built on Maslow's (1949) human relations approach which posed that individuals have complex needs. At the lower end of need hierarchy is physiological, safety and love needs. At the higher end is esteem and self-esteem needs. Through various motivation strategies, the mentoring model was designed to satisfy esteem and self-actualization needs.

A second relevant component from motivation theory is Porter and Lawler's (1975) findings that motivation does not equal satisfaction or performance. What is most important is what occurs after performance. That is, if employees are rewarded with something they value, they will be motivated to perform better. This was an essential component to the mentoring model. First, the desired performance must be considered attainable by the protégé and then the mentor must assess what rewards the protégé values.

Section IV The Mentoring Model- Execution

The formalized mentoring model combined the relevant components with the best strategies of mentoring and training and formulated the following steps for the mentor model:

1. Appoint a mentoring committee headed by a program coordinator. In this step, the committee determines the objectives for the mentoring program. The committee identifies the target population and the desired outcomes for mentors, protégés and organizations.
2. The committee conducts a needs assessment to determine if any current organizational programs or practices undermine the objectives of the mentor program.
3. The committee then provides alternatives to the undermining programs that will support the mentor program.
4. The committee notifies the targeted population that they are eligible to participate in the mentoring program. Applications for protégés are accepted. The committee identifies the potential participants. Protégé selection is completed. Mentors and protégés are matched for the best possible relationship.
5. A workshop for mentors is offered. The mentors are informed of the possible problems and assets of the mentor program. They are taught strategies to encourage learning.
6. A workshop is given to the mentoring pairs. Plans for future instruction for the protégé are completed. These are based on the protégés' preferences for mentoring topics.

At the workshops the mentors, protégés, and coordinators' responsibilities are discussed and enumerated. The mentor's responsibilities include (1) planning frequent interaction with the protégé, (2) providing access to special projects and committee meetings, (3) providing honest and positive feedback regarding the protégés strengths and weaknesses, (4) offering information regarding future job

openings, (5) providing a confidential environment, and (6) encouraging the protégés to attend classes, seminars and other educative functions that are relevant to protégé's growth.

The protégé's responsibilities include (1) a self-assessment of weaknesses, strengths and values, (2) drawing up a career plan to be discussed with the mentor, (3) creating a contract for professional development that includes a timeline for specific activities and skills to be acquired, (4) keeping confidential information confidential, and (5) attending the workshops that are required for all protégés.

The coordinator responsibilities include (1) regularly obtaining qualitative and quantitative data to evaluate the mentor program, (2) meeting with the committee regularly to discuss the results of the data and come up with solutions, (3) ensuring that the mentoring relationships are in sync with the business strategy, and (4) providing information to senior management about the program's progress.

Section V Summary

Mentoring has been noted in the literature as essential for career advancement (Roche, 1979; Phillips-Jones, 1982), an effective management tool benefiting both the individual and the organization (Dalton, et al., 1977: Clawson, 1980), and a key influence between younger and older adults in their developmental and psychosocial stages of career development (Levinson et al, 1978; Erikson, 1968). Currently, career development opportunities have been affected by technological, organizational and individual changes. Faced with these changes, organizations as well as employees, will have to be more adaptive when dealing with career opportunities (London & Stumpf, 1986). Since mentoring takes into account the developmental stages of the individual as well as the needs of the organization, it can provide a vehicle for career development.

Since most organizational mentoring programs are not formally written, it has been difficult to determine what works and what does not. In addition, successful mentoring programs are hard for other organizations to replicate without a written procedure. This study addressed this problem and created a written mentoring model for career development. It was developed through the synthesis of the best mentoring practices along with a content analysis of the fields of career development, developmental psychology, social learning theory, adult learning theory, training and development, and work motivation. The mentoring model was designed for aspiring adults in organizations.

Recommendations for Future Studies In order to validate this mentoring model, it is recommended that an implementation of this mentoring model be studied in organizations. In addition, different types of organizations should be studied to determine if parts of the model should be adapted for specific types of organization.

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Enhancing New Employee Development: A Longitudinal Examination of Socialization Processes and Turnover

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Newcomer perceptions of socialization were measured and related to turnover in a longitudinal design. Results suggest aspects of newcomer pre-employment anticipation, feedback seeking behavior, and adaptation difficulty predict voluntary turnover. Preliminary evidence suggests that mediated causal paths link other aspects of newcomer socialization perceptions, work attitudes, and turnover.

Models of organizational socialization have described stages and processes newcomers go through (Buchanan, 1974; Feldman, 1976; Louis, 1980, 1985; Schein, 1978; Van Maanen, 1976; Wanous, 1980);organizatinoal socialization tactics and practices (Louis, Posner & Powell, 1983; Van Maanen & Schein, 1979; Zahrly & Tosi, 1989, Holton, in press); pre-employment interventions (e.g., realistic job previews,Meglino & DeNisi, 1988; Premack & Wanous, 1985), newcomer characteristics (Jones, 1986); and newcomer adjustment tactics (Ashford, 1988; Bauer & Green, 1994; Feldman & Brett, 1983; Morrison, 1993; Ostroff & Kozlowski, 1992). Some researchers attempted to blend alternate research approaches into interactionist models (Ashford & Taylor, 1990; Jones, 1983; Miller & Jablin, 1991; Reichers, 1987) portraying newcomers as proactive participants in the transitions from job candidate to newcomer. Recently, emphasis has been on understanding the content of socialization related learning (Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994). Fisher (1986), Feldman (1989) and others noted efforts to test these theories have been fragmented and incomplete.

The purpose of this study is to investigate the combined effects of constructs identified in previous socialization research on socialization outcomes. Specifically, the joint effects of organizational tactics, individual tactics, individual readiness, perceptions of the socialization process, perceived job characteristics, socialization learning, expectations and coping responses on turnover and job attitudes of new employees were investigated in a longitudinal design. No prior research has examined all of these variables simultaneously in a longitudinal design.

Background and Hypotheses

Figure 1 portrays a taxonomy of these construct domains. Domains are ordered chronologically, i.e. pre-employment anticipation, newcomer and organizational tactics logically occur before perceptions about the job, etc. Though presented in a linear fashion, they may occur cyclically over an extended period of time. Prior research and theory examining subsets of these variables are described below.

Socialization Inputs Three groups of variables are present when newcomers first enter an organization: a newcomers level of readiness for socialization; a newcomer's adaptation tactics; and the organization's socialization tactics.

Individual Readiness. Fisher (1986) suggested that a newcomer's willingness to engage in a socialization/adaptation process (what she called "socializability") before and after organizational entry influences socialization outcomes. This is conceptually similar to the "anticipation" of Mowday, Porter, and Steers' (1982) organizational attachment model (containing applicants' pre-entry cognitions, motivation, affect, environmental circumstances, and exploratory activities).

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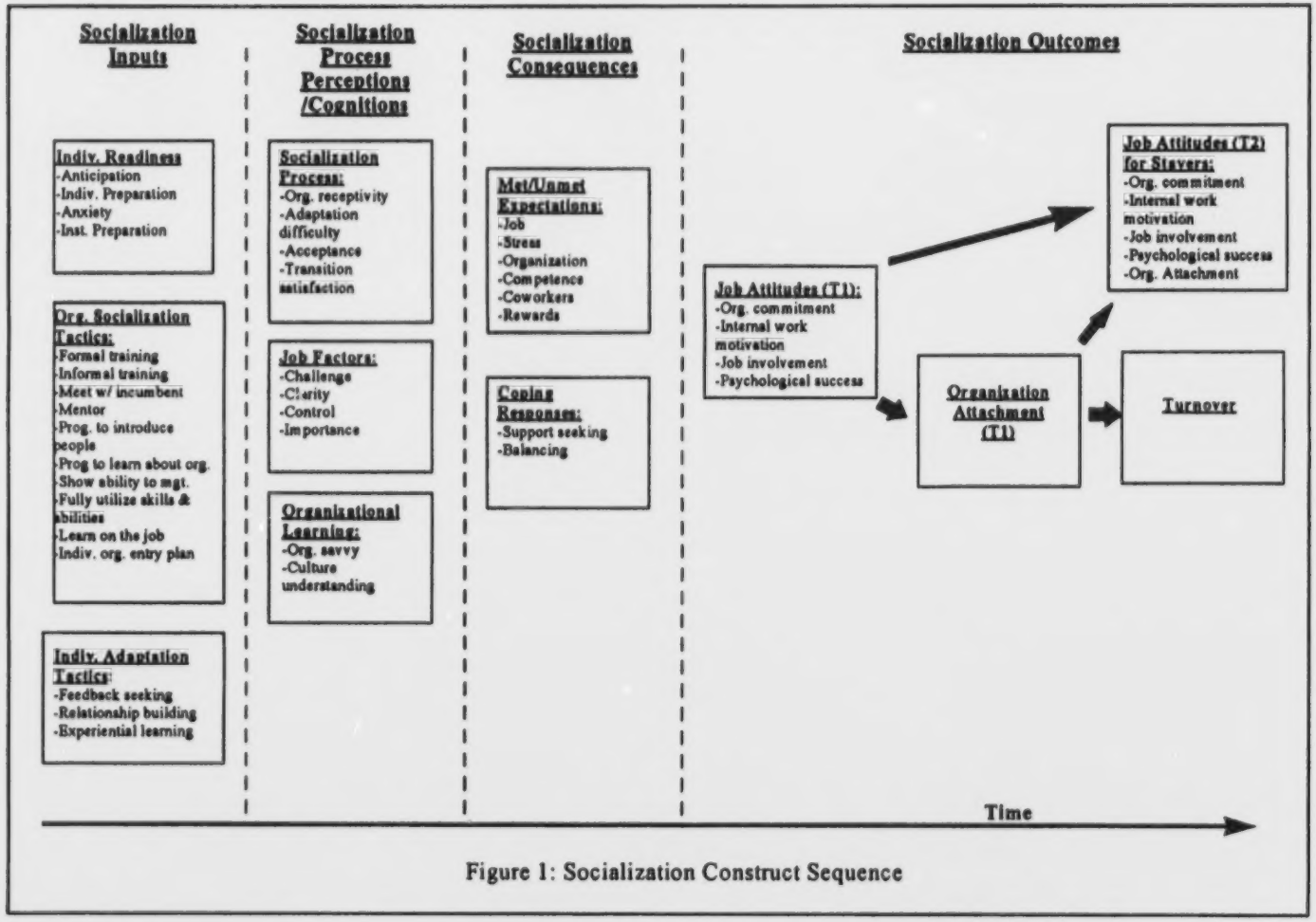

Figure 1: Socialization Construct Sequence

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Stumpf and Hartman (1984) reported relationships between career exploratory behavior prior to organizational entry and socialization processes, job attitudes, and turnover intentions after organizational entry. Bauer and Green (1994) found involvement in work-related activities prior to employment related to socialization outcomes.

Organizational Tactics. Results suggest support and information provided to newcomers by employers is related to satisfaction, performance, commitment, intent to turnover, turnover, and stress (Fisher, 1985; Miller & Jablin, 1991; Louis, Posner & Powell, 1983). Holton (in press), Louis, Posner & Powell (1983), and Nelson and Quick (1991) reported significant relationships between organization tactics and commitment, satisfaction, and intent to quit.

Individual Adaptation Tactics. Ashford and Taylor (1990), Miller and Jablin (1991), Morrison (1993), and Ostroff and Kozloswki (1992) found newcomer information and feedback seeking related to socialization outcomes including job satisfaction, performance and intentions to quit.

Socialization Process Perceptions/Cognitions The second group of constructs in Figure 1 capture newcomers perceptions and cognitions of the socialization process and job factors after entry.

Socialization Process. Newcomers learn a great deal about the organization through work interactions. Research suggest interaction with coworkers provides social acceptance and support (Ashford & Taylor, 1990; Katz, 1985; Louis, 1990) and ameliorates effects of unmet expectations (Fisher, 1985; Major, Kozlowski, Chao, & Gardner, in press). Reichers (1987) viewed coworker interaction as the primary mechanism for social learning. Newcomers perception of organization openness and feelings of integration into the organization should influence socialization outcomes (Ashford & Taylor, 1990; Schlossberg 1981).

Job Factors. Hackman & Oldham's (1975) suggested perceptions of task identity, significance, autonomy, feedback, and skill variety will affect employee motivation, satisfaction and turnover. Research has generally supported the model (Loher, Noe, Moeller & Fitzgerald, 1985), suggesting young, well-educated employees are most likely to see their jobs along these dimensions (Fried & Ferris, 1986). Results also suggest newcomer job challenge, significance, and clarity enhance newcomer learning (Morrison & Bratner, 1992), while role ambiguity, and conflict diminish performance, satisfaction, and commitment (Brief, Aldag, Van Sell, & Melone, 1979; Feldman, 1976; House & Rizzo, 1972).

Organizational Learning. Newcomers must quickly learn many aspects of the organization (Feldman, 1989, Fisher, 1985) including its culture (Schein, 1968). Newcomers must use their knowledge about culture to make sense of daily organizational activities (Louis, 1980) and power structure (Louis, 1982). Chao et al. (1994) found newcomer learning on six dimensions (performance proficiency, people, politics, language, history, and organizational goals and values) related to turnover.

Socialization Consequences Chronologically, newcomers are expected to use their perceptions and Cognitions in determining whether their expectations were met and what, if anything, to do about it.

Met/unmet expectations. Realistic job preview (RJP) research reports a strong correlation between met expectations and job attitudes (Premack & Wanous, 1985; Wanous & Colella, 1989). New college graduates reported mismatched expectations as a common problem (Arnold, 1985; Gardner & Lambert, 1993; Holton, 1995; Keenan & Newton, 1986; Nicholson & Arnold, 1989, 1991; Richards, 1984a, 1984b).

Coping responses. Adapting to a new organization is stressful for some individuals, particularly when expectations are not met (Frese, 1984; Katz, 1985; Nelson, 1987) and newcomers are likely to engage in coping activities. Fisher (1985) found social support helped reduce levels of unmet expectations, while Nelson and Quick (1991) found social support reduces stress.

Socialization Outcomes Job attitudes and turnover have been widely examined and supported as outcome measures in socialization research (Fisher, 1986). Tests of (employee) turnover models suggest job attitudes influence organizational attachment and turnover (Mobley, 1977). Consequently, socialization processes are expected to influence newcomer job attitudes (e.g. commitment, satisfaction) which subsequently influence newcomers' attachment to the organization. These expected relationships led to this research hypotheses:

> Hypothesis: Readiness, organizational socialization tactics, individual adaptation tactics, perceptions of the entry process; perceptions of job factors, organizational learning; met expectations, coping responses and job attitudes will be negatively related to newcomer turnover.

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Method

Sample Surveys were sent to the entire 2,214 bachelor's graduates from a large state university for whom current addresses could be obtained, yielding 846 responses (38.2%). Respondents in graduate school (21.7%), jobs not perceived as appropriate for their career, and not looking for a job (12.8%) should hold very different sentiments about transitions to work and were dropped from the sample, reducing the sample to 548 (65.3%). Only those employed in for-profit organizations were retained for analysis - education, government, and other non-profit employers were excluded to control for differences in socialization construct domains by organizational type. Thus, the final sample consisted of 378 bachelors degree graduates employed in business, professional service or other for-profit organizations in career appropriate positions.

A second survey was mailed approximately three and one-half years after the initial survey. Current addresses were obtained for 298 (78.8%) of the 378. Three mailings yielded 258 usable responses for a response rate of 86.6%. Thus, followup data was collected for 68.3% of the original for-profit, career-appropriate-position sample.

Scale development process No published instruments measured the newcomer perceptions of these socialization construct domains when the surveys were mailed (Chao et al., 1994 was not available). Items were developed or selected from existing measures and content analysis of 125 interviews with new employees (one year experience or less), direct supervisors of new employees, and senior executives from 12 organizations hiring large numbers of new college graduates. The organizations were selected to provide a cross-section of industries. Interviewees were asked broad, open-ended questions on each domain in Figure 1. Interviews were transcribed and content analyzed to develop survey items. All items used 5-point Likert scales (unless otherwise noted) and are presented in tables reported in the results.

Measures - Time 1

Individual readiness measures. Twelve original items assessed newcomer pre-entry activities and attitudes toward the transition. Example items included the degree to which they felt prepared to start their jobs and whether steps were taken to prepare for the new employer.

Individual adaptation tactics. Twenty-one items reflected newcomer tactics and strategies used to aid organizational entry. Items described feedback seeking, building relationships, seeking support from friends, and proposing new ideas.

Organizational socialization tactics. Twenty common newcomer development tactics were identified from the literature (Louis, Posner, & Powell, 1983) and informal development and non-programmatic tactics described in the interviews. Respondents indicated tactics' helpfulness on a 6-point Likert scale (cf. Louis, Posner, & Powell, 1983 - "never available" was coded 0). Responses to each organizational tactic item were treated as separate variables in subsequent analyses.

Perceptions of organizational entry experiences. Sixteen original items tapped newcomer perceptions of organizational entry experiences, including organization receptiveness to newcomers and newcomer difficulty in adapting to the new environment.

Job factor perceptions. Nineteen items tapped job characteristic constructs identified in the literature (Ashford & Cummings, 1985; Mabey, 1986; Hackman & Lawler, 1971; Hall & Lawler, 1970; Rabinowitz & Hall, 1981; Rizzo, House, & Lirtzman, 1970). Adoption of existing instruments was deemed inappropriate due to content addressing job characteristics not experienced by newcomers (e.g., long term relationships with coworkers).

Organizational learning. Thirteen original items tapped newcomer perceptions of how well the organizational culture, formal, and informal structures were understood (e.g. "I understand most of the values of this organization," "If I need to get something done, I usually know the person to whom I should turn to make it happen).

Met/unmet expectations. Thirty-four original items assessed whether newcomers felt their expectations had been met. Items were derived from the interviews and previous studies of new college graduate expectations (Arnold, 1985; Mabey, 1986; Dean, 1981). The five-point Likert scale ranged from "considerably worse than expected" to "considerably better than expected." Items captured expectations regarding job challenge, opportunities, coworkers, affect on personal life, job demands, and rewards.

Job attitudes Six job attitudes were identified from interview content and are commonly used in socialization research (Fisher, 1982), partially supporting interview content validity. Existing attitude

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scales were used All demonstrated high reliabilities in previous research.

Demographic data. Single items obtained information on company size (number of employees), newcomer age, sex, race, undergraduate major, undergraduate GPA, and employment experience.

Measures - Time 2

The followup survey assessed relevant career outcomes. Three groups of items included: 1) demographic data on current employment; 2) turnover data; and 3) the job attitude scales used at time 1. Turnover was determined by asking respondents at time 1 and time 2 how many organizations they had worked for since graduating from college. A non-zero difference between the two measures was coded as turnover.

Analyses. After deriving descriptive statistics, two sets of analyses were performed. First, as noted above, a large number of original items were developed to capture newcomer perceptions of socialization phenomena. Exploratory factor analyses were conducted to identify important dimensions of the socialization construct domain. Second, hierarchical multiple regression analyses were conducted with variables were entered as groups based on the chronological order shown in Figure 1. Structural equation modeling would be a more powerful analysis in the presence of a strong, comprehensive theory of socialization. However, the socialization model in Figure 1 only captures a chronology of socialization phenomena built upon studies examining variable subsets. No comprehensive theory of latent nomological relationships current exists. The current analyses constitute a first step toward such a theory by simultaneously examining relationships between newcomer socialization perceptions, work attitudes, and turnover in a longitudinal design.

Results

Descriptive Statistics . Respondents at time 1 were employed about 10.5 months at their current organization. Most newcomers were in firms with over 1,000 employees (57.7%), were male (57.1%), white (94.4%), with GPAs between 2.0 and 3.0 (59.3%). Business (36.8%) and engineering majors (25.7%) were dominant. Respondents did not differ significantly on demographic information between times 1 and 2, though average months employed at the current organization increased to 34.3 and number of organizations worked for changed from 1.37 to 2.07.

Psychometric Characteristics of Socialization Scales Exploratory common factor analyses with oblique rotations were performed on all items except the organizational tactics. Loadings were characterized by interpretable simple structures. Importantly, original items developed yielded exceptionally clean loadings (average loading greater than .50 on the major factor for 21 of 29 scales and less than .20 on all other factors for all scales) .

Twenty one of the 29 scales exceed Nunnally's (1978) suggested minimum reliability of at least .70 for instruments in early stages of development (average alpha = .78), while eight scales had marginal reliabilities between .50 and .69. Random measurement error causes tests of significance in hierarchical regression to be conservative, hence all scales were used in tests of hypotheses 1 and 2. Bivariate correlations among the scales display a wide range of values . Significant correlations with turnover were found for 15 out of 40 socialization measures (r = .14 to .30).

Hypothesis test Socialization input (individual readiness, individual tactics, organizational tactics) variables entered the hierarchal regression first, followed by perceptions and Cognitions of socialization (perceptions of socialization process, job characteristics and organizational learning), met expectation and coping response scales, and job attitude scales, respectively. Organization attachment was entered last. Results in Table 1 indicate that five predictors significantly entered the full model, explaining 30.5% of the turnover variance. In addition, four of the five steps exhibited significant increments in predictive power. Anticipation and adaptation difficulty were positively related to turnover while organization attachment, feedback seeking and job involvement were negatively related. Anticipation was not a significant predictor when entered in step 1, but was significant all subsequent steps. Feedback seeking and adaptation difficulty also made stable contributions, entering in the second step and remaining significant in all subsequent steps. Interestingly, only one expectation variable (reward expectations) was a significant predictor (negatively associated) when entered at step 3. Two of the organizational tactics, providing a mentor and providing opportunities to use skills and abilities, were significant predictors at step 1 and step 2.

Table 1: Hierarchical Regression Summary

Variable	Significant Betas				
	Step 1	Step 2	Step 3	Step 4	Step 5
Anticipation		.19	.17	.16	.17
Mentor provided	-.15	-.13			
Fully utilize skills & abilities	-.21	-.18			
Experiential learning	-.06				
Feedback seeking		-.19	.17	-.20	-.19
Relationship Building		.18			
Adaptation difficulty		.21	.16	.19	.18
Challenge		-.17			
Reward expectations			-.19	-.18	
Job involvement				-.19	-.18
Organization attachment					-.28
R^2	.114*	.199**	.265**	.292**	.305**
ΔR^2		.084**	.067**	.027	.013**

* $p \leq .05$, ** $p \leq .01$

Discussion

These analyses are the first to examine measures of turnover and the pre-employment, socialization, and work attitude construct domains in one setting. Regression results reported in Tables 1 and the longitudinal design suggest newcomer pre-employment anticipation and initial (first 10 months) feedback seeking behavior, adaptation difficulty, and job involvement predict voluntary turnover. Pre-employment anticipation, feedback seeking, and adaptation difficulty contributed significantly to turnover prediction in the presence of all variables in every step. The apparent absence of mediational processes is consistent with the large literature examining one pre-employment anticipation "intervention," i.e., realistic job previews (Premack & Wanous, 1985). In addition, it supports recent research on proactive feedback seeking as a critical newcomer skill (Morrison, 1993) and the relevance of individual transition theory (Scholossberg, 1981) to newcomer socialization. To be sure, these results only suggest causal influences. Definitive causal evidence will only exist when theory identifies all relevant antecedent variables, some subset of the variables are manipulated at Time 1, all other variables are controlled for (experimentally or statistically), and suggest changes in the relevant dependent variables occur in predicted directions.

The current results suggest a model of newcomer socialization must include construct domains capturing 1) pre-employment activities affecting anticipation, 2) newcomer feedback seeking behaviors, 3) newcomers affective responses to the socialization experience (adjustment difficulty), and 3) newcomer attitudes. Consistent with this sequence, Table 1 results suggest two organizational socialization tactics (providing a mentor and fully utilizing skills and abilities) significantly contributed to turnover prediction in steps 2 and 3 but contributed nonsignificantly when attitudinal reactions were entered (Steps 4 & 5). Similar results occurred when the coefficient for perceptions of early job challenge entered significantly at step 3 then became non-significant in step 4 when the degree to which reward expectations had been met was entered (slowly approaching zero in each subsequent step). Met expectations for rewards also became nonsignificant in step 5 when organization attachment entered.

The results are also revealing in what variables do not significantly contribute to turnover prediction. For example, with the notable exception of providing a mentor and designing newcomer jobs to fully utilize their skills and abilities, all other widely used organizational socialization tactics consistently failed to predict Time 2 turnover. Fully utilizing newcomers' skills and abilities and providing mentors were the only organizational socialization tactics with significant simple turnover

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correlations.

These results support calls for a broader definition of new employee development to include both socialization and task training (Feldman, 1989; Holton, in press). Aspects of new employee development explained a significant portion (30.5%) of the variance in turnover from first jobs. Turnover is expensive for organizations, suggesting potentially substantial returns from new employee interventions to reduce turnover. In a complex analysis considering the joint influence of all aspects of the socialization system, results clearly show that new employee development has a very important relationship with turnover. In addition, significant predictors for the whole model and subsets focus on task and non-task related aspects of new employee development, suggesting the need for a broader range of interventions than traditional orientation and task training. These interventions span the full range of HRD interventions such as mentoring, training, organization development, on-the-job training activities, etc.

If we assume a causal sequence, well-managed and facilitated new employee development can be a powerful strategic lever when implemented in a comprehensive manner. Given the cost of hiring new employees, the high cost of turnover, and the importance of retaining highly skilled new employees, an integrated NED strategy is likely to have a high payoff to the organization. The new horizon in new employee development research is testing the effects of different intervention designs and strategies (type, content, timing, formal/informal mix, etc.) on performance and turnover outcomes. Unfortunately, the literature describing interventions and outcomes is sparse, consisting of a few case studies from the field. This study points specifically to research and innovations in these areas:

- Assessing new employee readiness for socialization.
- Tailoring interventions to varying levels of readiness.
- Training new employees for entry, including feedback seeking, relationship building, and transition management skills.
- Designing entry jobs to more effectively utilize newcomer abilties.
- Designing interventions that prepare organizational insiders (managers and coworkers) to facilitate successful entry
- Partnering with institutions preparing new employees (e.g. colleges) to increase readiness.
- Investigate the causes for the relatively low impact of organizational interventions on turnover
- Expanded role for non-training interventions (e.g. mentoring, skill utilization).

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Developing the Portfolio Career

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This paper will consider a contemporary career transition from a successful position in an organisational hierarchy to the looser and more volatile world of building a career from a variety of working arrangements - a "portfolio career". Drawing on interviews with ex managers of the British National Health Service changing notions about career are examined and implications for personal and professional development explored.

Work in the 1990s and beyond is widely predicted to be different from what has gone before. Commentary abounds to explore the new realities of the workplace. The developing orthodoxy favours notions of fluidity, flexibility and radical restructure. The ability to live with ongoing turbulence is assumed. Hierarchies, rigidities and other manifestations of bureaucratic forms are eschewed.

The impact is considerable. Jobs are lost, potential career paths disappear, insecurity and anxiety are endemic. (Pahl 1995).The mutual expectations of employer and employee are called into question as the nature of the psychological contract (Robinson and Rousseau 1994; Herriot and Pemberton 1995) is re-examined. Loyalty, commitment and service are less likely to be rewarded with security, stability and a sense of progress.

The collapse of the bureaucratic career? The concept of career is judged to have collapsed (Holbeche 1995).Career as a coherent, stabilising, organising principle for a working life is bound up with clearly identified jobs, bureaucracy, stable organisations, and with the middle class. With their reported demise or troubles careers are deemed to be in crisis.

The discussion proceeds with the shadow of Organisation Man (Whyte 1956) in the background:

> *"these are the ones of our middle classes who have left home spiritually as well as physically to take their vows of organisational life , and it is they who are the mind and soul of our great self perpetuating organisations.* (Whyte 1956:3)

A career in this view was about life long service and a recognition that some freedoms, individuality and creativity may be sacrificed for the promise of a steady, secure job, a life of order and calm with the attendant symbols of increasing success. It is this rather limited view of career -the bureaucratic career- which is the subject of current discussion on the impact of organisational change. (Kanter 1989, Herriot and Pemberton 1995, Handy 1994).

Careers advice. The advice available to individuals is blunt. Manage your own career (Golzen and Garner 1990); don't expect employment security instead seek the security of your own employability (Kanter 1989); get out and sell your skills to a variety of buyers (Handy 1994); look after number one. For organisations the challenge will be to ensure best effort, flexibility and adaptability from staff without the obvious endorsement of progress through an organisational hierarchy. A further challenge will be in establishing mutually beneficial arrangements with individuals on a variety of employment contracts which involve a more tangential relationship with the organisation.

Much of the growing rhetoric on dealing with these "new realities" is inspirational but lacking rigour in ideas for operationalisation. Deep seated issues about the impact of career identity and future expectations on the life and plans of individuals socialised into the old order are not given sufficient recognition. Situational contraints and opportunity structures are also underplayed. The very notions of motivational drivers and what constitutes success at work are being called into question. This research acknowledges calls (Bailyn 1989; Mirvis and Hall 1994) to study the changing career world of "leading edge examplars" of predicted changes in working patterns. The focus is on so-called portfolio workers. Given a dearth of acceptable definitions this research has taken portfolio working to apply to managerial

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and professional people, the previously privileged in career terms, the eminently employable whose personal career history was about the promises of bureaucratic forms and whose career scripts may well have been informed and judged by that rhetoric and who now are selling their skills gained in those careers to a variety of clients.

Career Theory

Career is social construction. In our highly competitive and industrialised environment in which bureaucracy has, to date, been the dominant organisational form, "career" reflects widespread and embedded notions of status, achievement and advancement as a social good. The term is used loosly in public discourse and HR literature but the prevailing view of a career is something planned and orderly, progressive and enacted rationally by the career holder (Inkson 1995, Evetts 1992)

Definitions . Most thoughtful recent texts (Mayo 1991, Herriot 1992, Arthur et al 1989) take issue with the rather simplistic notion of a career as an upward and onwards sequential process.However, the narrower definitions persist.. A recent example, distinguishing careers from jobs:

> *"Careers flow from jobs...a job need not lead anywhere; it is just something a person gets paid for. Careers, on the other hand, are continuous behavioural episodes, leading to a path or ladder that ends, optimally, in some sort of career capstone experience"* (Leach and Chakiris 1988:50)

This distinction is at the heart of much career theory. Career is in many respects an elitist notion reserved for those who have sufficient labour market clout to plan and enact their own progressing destinies and who derive positive self concept from their occupation or organisation.

Other recent definitions are rather more bland:

> *"A career is a sequence of work-related positions occupied throughout a persons life"* (London and Stumpf 1982:4)

> *"Evolving sequence of a person's work experience over time"* (Arthur et al 1989:8)

These definitions disappoint. They strive to be non-judgemental and inclusive of different working experiences yet in doing so they become virtually meaningless given the common preoccupations of career theory. Indeed Thomas (1989) talking about the neglected topic of blue collar careers suggest such definitions duck the issues and "hollow out the core concept". He insists that the "normative achievement oriented model" persists and so " career" describes the working lives of only a few.

Marshall (1989) in a femininst invitation to revision career theory acknowledges that theoretically a range of career possibilties are mooted but that they remain tinged with failure if they do not conform to the prevailing norm.

There is a pool of shared understanding of what constitutes success in a career which excludes much of the potentially rich variety of experience of working and personal life.

Impact of career discourse. Definitions of career and prevailing career discourse matter because career is bound up with issues of identity, material and psychological success, reputation and status. Upward and onward is revered and "fires the success ethic" (Mirvis and Hall 1994:368). Career allows for an expectation that hard work, ambition, diligence will bring its own reward. Those rewards are recognisable badges to others in the form of salary and its symbols.However, rapid changes in our expectations of work are having profound effects on our prevailing views on career success thus inducing much anxiety and identity struggles. (Pahl 1995)

As social beings we are concerned to ensure a minimum consistency of our lives with those around us (Berger and Luckman 1967) and can accept our own patterns of behaviour as "repeating a sequence that is given "in the nature of things" or in (his) own "nature" Berger and Luckman 1967:117)

Career resounds in peoples lives, it provides a timetable for checking if you are "on course" and a measure of yourself against others. There is a "psychic challenge" (Mirvis and Hall 1994) for individuals in the minority,like the participants in this research, to adjust their career expectations from the prevailing norm particularly where that has previously provided a principle to govern and explain one's own working life.

Structure and action. The concept of career is an ideal vehicle to attempt to understand the impact of change at individual and organisational level. Studying career involves both the objective dimensions of an individuals working life and the meanings they attach to it which themselves draw on socially ratified career paths and identities which have a shared meaning in wider society. Career is about the past and the future and as such links the individual with their own needs, aspirations and dispositions to the changing social structure including the organisation world.

Much career theory is dogged by a tendency to reification of the notion of careers and career structures (Evetts 1992); by a view of career as a prescribed set of journeys to a specified destination; and by an approach which favours either the individual or the organisational level of analysis in isolation.(Gunz 1989; Barley 1989). As Nicholson and West (1989) so succinctly summarise it : *"it inclines one to view the jouney as an attribute of the traveler rather than the compulsive nature of the terrain"* p 181. This is to miss the opportunity to reflect on the inter-relationship between structure and action in careers.

Careers are about individuals as social as well as psychological beings and as members of collectivities. They have a recursive role in linking individuals to changing social structures.A career path is not only of the individuals making. Although they indeed plan and make choices they will only make sense within the interpretative schemes commonly available.

Individuals themselves may regard career structures as having an objective existence and by following the scripts and patterns those very structures are reproduced in the interpretationas and actions of individuals. *"Only when a path is socially recognised can the individual draw from the career a ratified identity"*(Barley 1989:51)

We learn to tell a sanctioned story to account for the events of our own lives and draw on existing (and evolving) scripts to fashion our futures. This role of interpretation in the structuring of action is particularly pertinent to a study which focuses on career paths which are in transition. Here the link of micro and macro actors is important.. As Kanter (1989) suggests the notion of individual career transitions can be enlarged to consider transitions among macro career forms. We may be witnessing the transition from the ascendancy of the bureaucratic career (culturally embedded and reinforced by the dominant rhetoric (Gowler and Legge 1989) to one which encompasses entrepreneurial and balanced living imperatives. There are societal consequences to career transitions.

The individual can be recognised as a knowing player in the construction of their own action and meaning. (Giddens 1986) This study is interested to consider if individuals are aware of any pioneering role in the formation of a career path which may be more clearly recognised by their successors.

A new rhetoric or reality?

The debate on changing organisational forms and the core\periphery distinction in use of labour is well rehearsed if inconclusive.(Whitaker 1992;Pollert 1991). Empirical evidence of the extent of changes is questionable (Hutchinson and Brewster 1994; Whitaker 1992, Hunter et al 1993). However, in general, it is not stretching the evidence on flexibility (Pollert 1991) to suggest that the tendency is to less predictablity and stability in organisational form and working patterns. Job change, part-time work, temporary work, self employment are increasing .(Institute of Employment 1994). However, the picture is complex. For example the majority of people engaged on fixed term contracts saw such temporary employment as a stop gap measure until permanent work could again be found. There is growing evidence that this trend is not without the hidden transaction costs which propelled the move towards bureaucracy in the first place (Johnson and Molloy 1995). This seems likely to be the subject of much research in coming years.

The picture of turbulent change, of white water and a verging on chaos is not sustainable for individuals without a route to personal survival. That is offered in the emerging rhetoric on careers. Like organisations, individuals must embrace change and take responsibility for their own destiny. Success or failure becomes the individuals responsibility. Level playing fields and equal access are assumed.

New Careers. Careers are to be free-form, (Leach and Chakiris 1988) boundaryless, (Mirvis and Hall 1994) protean (Hall 1976) fulfillment is offered with empowerment to manage one's own destiny, (Golzen and Garner 1990) creativity is encouraged, learning explodes and individual entrepreneurialism flourishes- now freed from more the stultification of the bureaucratic form. The new imagery is of

patchworks, mosaics, portfolios, dynamic masses of particles some splitting and moving, others stationery (Pahl 1995). A dominant theme is career as entrepreneurial and self-effected: *"in a career sense we are self-employed now"* (Golzen and Garner 1990:) This is echoed in Bridges (1995) recent edicts to manage your life and career as a business "You and Co" (or Me Unlimited as offered by one research participant).

As in the debate generally on flexibility (Pollert 1991) there is a tendency to proclaim this approach as a self evident and indeed a higher order good. Who could argue with the option to follow one's own star.

The language scolds for our past dependence. We can no longer rely on organisations to manage our career for us. *"Many individuals abdicate responsibility for managing their own careers"*(Preston and Biddle 1994)

The self help literature grows (Guterman1991; Barner 1994; Waterman et al 1994))specifying a range of behaviours and meta-skills to acquire. A range of life possibilities are opened up.There is indeed hope that a personal liberation will flow from a recognition that a working life can be successfully pursued in a rich variety of ways. Leach and Chakiris (1988) ask if we will recast the notion of career and revision work to include activities relating to:

"culture, world peace, justice, beautification, spirituality, leisure, citizenship, mental health and life long education (Leach and Chakiris 1988:51)

Maybe, but is it more likely that the grimmer realities of forging in a career in entrepreneurial mode will provide fun for the few (Hirsh 1994) and a great deal of sapping anxiety for most ?

To reappraise career expectations is potentially a profound experience for individuals. Career success was an understood mechanism of advancement and thus what an individual takes to be advancement is socially ratified (Pahl 1995). It is this social acceptance which underpins the whole idea of career success. For those involved at the sharp end of emerging career paths there is potential anxiety and questioning of identity. After all how does one judge success in a "portfolio" career?

The research study

This paper focuses on a group of people who appear to be examples of the advice of Handy (1994), Kanter (1989) and others (eg, Waterman et al 1994) to seek security not in employment but in employability; to follow a "portfolio" based career; to manage that career.

Given the lack of research on "flexible workers" (using the term loosely) in general in context of a growing rhetoric about their needs and motivations, there is much scope to explore how they construe their career world and what implications that has for self and for organisations.

The research wants to know about the drivers to flexible working within a group who had previously built a career within an organisation and what relevance they might have in forming a new career identity and implications for personal and profesional development.

The organisation The NHS was chosen as the primary case study following pilot interviews with individuals from various sectors because:

1.it provides an example of the previous "job for life" approach to career development
2.it has been subject to specific challenges to working practices, in particular the imposition of a more market, contract - based culture, arguably in direct opposition to some long held beliefs about the nature and social purpose of the organisation.This may well have impacted on individuals attitudes towards the organisation.
3.it has offered previously well defined career paths and the organisation has expressed its interest in considering how appropriate they are for changing circumstances.

The research particpantsThis research is tightly focused on individuals who:

1. have had a career in the traditional sense in the NHS achieving a managerial position by the time of leaving.
2.are now experiencing a more mixed portfolio of work
3.and who have retained some working connection with the NHS
4.for whom "portfolio working" is a relatively recent transition (maximum 3 years)

The research participants, thus, have in common an objectively similar status passage and previous career script.

Methodology The research design is based on in-depth, biographical interviews aiming to explore the subjective meaning of the phenomenon of career and the impact of their recent work role transition.

The research design acknowledges the importance of personal interpretation of career events and in doing so recognises the need to to delve below the events of the story participants tell. The initial data collection is near completion. (18 interviews have so far been conducted). All interviewees will be followed up after one year to afford some longtitudinal data. In the spirit of qualitative research and an inductive approach, analysis has been ongoing and there has been a preliminary work on coding for final analysis which will be done using the NUDIST system. This paper is based on the analysis to date of the rich and varied accounts. As yet there has been insufficient immersion in the data to report results with full confidence. This paper intends to share emerging thoughts and working observations deriving from the literature and empirical research.

Research Findings

All the research participants had experienced their previous working life as successful. All now fitted the Handy (1994) model of selling skills to a variety of customers (although most only looked for clients within the Health Service); all agreed with the dictum of managing one's own career and most had some sense of pioneering a new way of working. The career images favoured were of patchworks and freeform drawings with delightful word picturespainted of helium balloons filled with all their past skills and now possibly ready to fly; jack in the boxes as they feel they have burst out from previous constraints. The overall impression was upbeat but overlaid with material and reputational anxieties. Success was being reappraised with notions of integrity; balance;renewed energy to contribute to the organisation in a different way and ongoing personal development being regularly expressed.

The concepts of career and of development both imply investment in the future. However, where future objective career moves are less predictable it is interesting to consider the intersection of the two. In reporting the findings to date the aim is to concentrate on those issues which are most pertinent to ongoing development. The key issues are about: career identity;the nature of the new contractual relationionships.

Career Identity:Entrepreneur, Portfolio worker or Casual labour? For some, the change is radical.

> *Its a complete career change. I've jumped off a career wheel and now I'm standing looking at it. I don't want to get back on. But this truly is the unknown"*

For others the transition has been a process of incorporating the change with what went before to ensure the smooth career story we are socialised to tell. Reputation remains paramount and is indeed more important than ever as future work depends on it. So, there is a sense that individuals experiencing the portfolio working remain locked in to external evaluation of how they construe their career world. Most were delighted to discover a renewed vigour at work, a positive sense of enjoyment, even play. However, this was expressed conspiratorially (*"my big secret. It protects me inside against family and friends who think I have commited career suicide"*)

Their new work patterns are generally being experienced as insecure and short-term and for most this engenders a high degree of anxiety. Despite this it is not surprising that individuals involved in an ongoing reappraisal of identity minimise this aspect and orient themselves towards more positive images. A minority of participants have a very varied working pattern.The majority characterised themselves as management consultants. This encourages speculation and further analysis about the role of adopting a ready made identity to present one's new working face to the world. Looking at their working patterns most are engaged in interim management, at best "extra pair of hands" consultancy and one-off projects. The content of the new work is often lower in standard and discretion than that expected in a previous role but the challenge is in the external circumstances- finding the work, networking, contract compliance and the associated business aspects of self-employment- all of which have to be learned. It may be that they have simply exchanged employment contracts for commercial ones.The push factor is more evident than pull. For the majority, there had been no previous orientation to entrepreneurial activity (except some instances of risk taking in building a career unconventionally within bureaucratic bounds). For all, their psychological contract with the organisation had been broken or very sorely tested. Work did not turn out as they had been led to believe; the organisation let them down. This was the "push" factor. None in this study so far had been made compulsorily redundant but some felt they had no personal and\or professional option but to leave.

There is scope for more analysis of the variables affecting individual adjustment to this transition. The majority of participants were not firmly committed to this as an ongoing career path expressed in ambiguity in reponses to questions about returning to the Health service. Some, however, had recognised a latent entrepreneurial need and others were relaxing with the trade offs being experienced in terms of achieving a more balanced life. (Stanworth 1995). The follow up longtitudinal data should shed more light on the variables involved.

There was a sense of struggle in reconciling the adoption of this ready made and ratified identity in light of their expressed ongoing needs for a sense of belonging.

Relational or transactional contracts. Publicly adopting the role of consultant in interaction with the organisation implies a transactional contract characterised by formality, short-termism and economic exchange. In this context no obvious role for organisations in ongoing development is suggested. However, the majority of the interviewees experienced their identity struggle most starkly in re-appraising their new relationship with the Health Service. The desire for more relational contracts was voiced by all. What was missing from a purely economic exchange was the sense of mutual trust, long-term relations, interpersonal attachments and a sense of enduring commitment to the organisation. This is where ongoing development has its most potent effect. Commentators (eg Mirvis and Hall 1994) raise the possibilities of more blurred contractual arrangements which diminish the distinctions between core and periphery staff. In that scenario (and it is still early days for flexible working at this level) a host of possibilities emerge about reciprocity in development.

Development :sharing responsibility? Tentatively, the interviewees explore their hopes of the organisations with which they will contract in the future. Their responses are ambiguous. They are convinced that development is their own responsibility.. All were conscious of the developing discussion of that issue and had largely imbibed the messages.

Their tactics and practice for doing so echoed those of the workplace- good intentions, annual planning in some cases, but having difficulty finding the time and a tendency to equate development with organised activity. Several had mentors; most used professional organisations to network and access courses. Despite avowals that they felt organisations had no responsibility to develop them (eg: "*I believe as a consulant you can' t have your cake and eat it. I think if you really opt to be a consultant, then you opt not to be core and development is solely your responsibility*") this tended to be contradicted in more general reflections on their changed role within the workplace. Most individuals hope was for a more relational contract with organisations than the consultant tag they had adpoted might suggest. A value driven orientation was evident and there was expressed a fund of good-will towards the task and the organisation.

Organisational career management schemes have tended to operate on the basis of identified jobs or core capabilities (albeit beset by normative assumptions and inadequately cognisant of power, politics and opportunity structures Rosenbaum 1989) In general career development in organisations is in a parlous state (Herriot 1992;Fish and Wood 1993) There are some notable exceptions of organisations attempting to restructure approaches to careers to cater for new workplace requirements. (Caudron 1994). The omens for a creative approach to contractual diversity by organisations are not wholly good as concerns are already being expressed about responsibilities for training temporary and part-time workers (CBI 1994) and the issue of women and dual career couples career paths remains controversial (Maddocks 1995).

The organisational imperative for commitment and creative input must be reconciled with the more instrumental advice to core and "non-standard" workers of managing one's own career. Organisational career control is minimal over individuals who operate on the periphery and there is indeed reluctance to invest in those who could be gone tomorrow. However, they are invited into the organisation to contribute in some way to organisational goals. It is not in the organisations long term interest to see this arrangement as purely transactional.The interviewees were adamant that they will go the extra mile if encouraged to do so.

Advice from the front line. The majority of participants had limited requirements of the organisation. There were pleas for induction, health and safety and other training diet staples.

Careers advice and help in recognising transferable skills had been offered to many and was overwhelmingly regarded as useful in itself and as a statement that the organisation valued the individual and wished them well in their new career world.

Soe felt the organisations were very naive in employing consultants such as themselves. It was

their experience that outcomes were not clearly specified and that essential support meachanisms were not always in place. There is scope for further exlporation about the implications of loose and tight contracts in light of desires expressed for a less transactional mode of engagement with organisations.

The main message was about organisation taking a more enlightened view about short-term investment. A common issue raised concerned those regular scenarios when the portfolio worker (or indeed management consultant) has a store of knowledge, cultural and practical about the organisation and is tune with the values but requires bringing up to speed on a specific issue (examples were about systems and techniques) in order to fulfill a proposed contract. The organisation may need to overcome some deep-seated objections to paying for, or faciltiating such devleopment for non core staff. Most interviewees had been hurt and surprised by the organisations reluctance to countenance such investment in many cases.Their legitimate point is that having been previously well trained by the organisation it is short-sighted indeed if the company loses the benefit of that by seeking a ready made solution elsewhere. The sense of journeying together is lost if organisations do not attempt to understand the motivations of those who have left them but retain the links.

Thompson (1993) considering the new management development needs for NHS managers recognises the need to promote new mind maps which can cope with the fragmented and business driven environment which may have been foreign to managers even 5 years ago. The interviewees feel they are uniquely placed to offer this sort of intervention. Thompson (1993) recognises *"a central role for specialists who can intergrate the formal with the informal, who are able to influence the centres of power, and are committed more closely to the mission of the NHS than just financial reward"* P117.Who better then the home grown products who retain these requirements but who have developed personlly and professionally by engaging in the painful process of re-inventing oneself in a career sense and acquired (often by hard knocks) the requisite business skills?

Summary

The data promises rich avenues for further exploration. If such flexible types of working arrangement are to be more embedded in the future organisations and individuals will benefit from understanding more about the motivations and needs of such workers. Key transitional issues can be overlooked by individuals, organisations and the supporting social structure. Hidden costs of new ways of working may emerge to challenge the very basis of it. Ongoing development is an issue for all and the portfolio workers in this study provide useful pointers to development which is not so clearly tied to organisation opportunity and reward.

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A Longitudinal Study of the Career Development and Aspirations of Women Managers in Business Firms (Second Phase)

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The purpose of this research study was to determine the career development and aspirations of women managers in business firms. The major method of this research study was the individual case study. Case studies relied on in-person and/or telephone interviews with the same 30 women managers who participated in the first phase of the study five years ago. The majority of the women managers worked for Fortune 500 companies and were located in the mid-west.

According to the U.S. Bureau of Labor Statistics in 1950 less than 35% of American women worked outside the home. By 1960, the number had climbed slightly to almost 40%. In 1985 for the first time in history, more than 50% of American women were in the workforce. Furthermore, this percentage has continued to increase each year. The trends indicate that, through the year 2000, the majority of the 25 million new entrants into the job market will be women. Johnston estimates in his 1987 book *Workforce 2000*, that by the year 2000, native-born white males--long the corporation's main source of managerial and executive talent will account for only 15% of the net increase in the workforce, vs. 55% of native-born women. The rest will be minority men and immigrants.

As the numbers of women working have changed, so have their roles. Women were once thought of as transient employees who worked only to purchase luxuries or to supplement household income, or to provide additional spending money; however, women's income is now relied upon by most two-earner families. It is predicted by the year 2000, in eight out of ten couples, the husband and wife will work (Labor Force Projections, 1992). In a surprisingly large proportion of cases, women are the sole bread-winners (Nieva, 1989). Stead (1987) determined that two-thirds of working women supported themselves, and Kessler-Harris (1982) found that women were committed to their jobs and desired meaningful careers with significant advancement opportunities.

Furthermore, women now seem more committed to their careers than women of earlier generations. This is supported by the following: (a) women are working later into pregnancy (US Department of Labor, 1993), (b) women are returning to work faster after childbirth (US Department of Labor, 1993), (c) seventy-eight percent of new mothers have returned to the labor force by the time their children are two years old (Rand Corporation, 1993), and (d) statistics show that the labor force participation of women with preschool children has more than quadrupled from 1950 to 1992 in the United States (U.S. Bureau of the Census, 1994).

The fact that women's careers are serious comes through in other ways. For the first time women constitute over half of university-level students. The courses that they are enrolled in are increasingly career-oriented. For example, according to the National Center for Educational Statistics in 1992 women were over 35% of those obtaining MBA degrees and 49% of those enrolled in undergraduate business programs. Over the past decade, the increase in the number of women graduating from leading universities has been much greater than the increase in the total number of graduates, and these women are well represented in the top 10 percent of their classes. (Schwartz, 1989). Marriage is being delayed by some of these women, and families are smaller. Because careers are important, women with good positions or those launched on their careers are less likely to drop out of the work force for long periods when they have children (Blau & Ferber, 1989). Those having the appropriate credentials take their careers seriously, work hard, and want to succeed (O'Neill, 1989).

While women have gained access to virtually every line of work and many of them have advanced to certain levels in organizations, their access to senior level positions remain limited.

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According to the U.S. Bureau of Labor Statistics (1993) women make up 47.8 percent of a loosely defined demographic category of executives, administrators, and managers. But, only a very small number of women have top jobs at America's major companies. Although opportunities for women have increased substantially in recent years, there are still a great many barriers as well as the unanswered question of why so few women reach senior level management positions in business firms.

Korn/Ferry International and the University of California-Los Angeles Graduate School of Management (1990) found that minorities and women hold less than 5% of senior level management positions in Fortune 500 industrial corporations and service firms. Furthermore, in the last 10 years there has been only a 2% increase in minorities and women in the top executive positions of America's 1,000 largest companies. Fierman (1990) examined the 1990 proxy statement of the 799 public companies on its combined lists of the 1,000 largest US industrial and service companies and found that of the 4,012 people listed as the highest-paid officers and directors of their companies, only 19, or less than one-half of one percent were women. When a similar project was undertaken in 1978, out of 6,400 officers and directors on its combined lists, which then included 1,000 industrial and 300 service companies, 10 were women. An analysis of the 1993 *Fortune* magazine list, show that there is only one women CEO--Linda Wachner of Warnaco, an apparel company. The U.S. Department of Labor (1991) analyzed data from a random sample of 94 reviews of corporate headquarters of Fortune 500/Service companies between 1989 and 1991. The data indicated that of 147,179 employees of those 94 companies, women represented 37% of employees and 16.9% of all levels of management, but only 6% of executive level leadership.

Despite increasing numbers of women in the work force and in business, women are definitely underrepresented in the most powerful management positions--those in the topmost ranks of the largest corporations that account for the bulk of this country's business wealth (Morrison, White, & Van Velsor, 1992). The literature presented indicates that the majority of the American women are in the workforce and that there are many women in middle level management jobs, but they are almost never found in top decision-making positions. The key issue now is whether women will go to the top ranks or just remain in the middle. By studying and understanding the career development and aspirations, as well as, the barriers that exist for women in management positions we can then facilitate the development and achievement of women to higher level management positions.

Objectives Of The Study

The primary goal of the first phase of this study (conducted five years ago in 1989) was to determine the career development and aspirations of women in middle level management positions in business firms. Some of the findings of this study revealed that the four factors most pertinent to the women managers success were educational credentials, hard work, mentors, and interpersonal/people skills. Also, bosses who did not guide or encourage their career progression, gender discrimination, lack of political savvy, and lack of career strategy, were identified most frequently as factors that hindered their career development. The findings also revealed that the majority of the women managers ultimately aspire to attain top level management positions, and they believe it is either very realistic to somewhat realistic that they will acquire these positions.

The literature holds plenty of evidence that women have an easier, and faster start on their career now than they did in the past (Coyle, 1989; Forbes, Piercy, and Hayes, 1988; Hardesty and Jacobs, 1986; and Powell, 1990). The problem is that getting women into corporations is not the same as moving them up. The results from the first phase of this study indicated that women are getting a good education, working hard, demonstrating competency on the job by producing high quality work, and are aspiring top level management positions. The second phase of this study (conducted in 1994) focused on determining why these women managers have or have not attained

the positions to which they ultimately aspired. More specifically, the objectives of this study were to determine the following:

1. What has been the work history of the women managers during the past five years?
2. Have the women managers attained and/or progressed toward the positions to which they ultimately aspired?
3. What factors have assisted the women managers in attaining and/or progressing toward the positions to which they ultimately aspire during the past five years?
4. What actions did the women managers have to take in order to attain and/or progress toward the positions to which they ultimately aspire during the past five years?
5. What barriers/hindrances have the women managers encountered in attaining and/or progressing toward the positions to which they ultimately aspire during the past five years.
6. What personal sacrifices did the women mangers have to make in order to attain and/or progress toward the positions to which they ultimately aspire during the past five years?
7. What types of education and training have the women managers participated in during the past five years that have assisted them in attaining and/or progressing toward the positions to which they ultimately aspire.
8. Have the career goals and aspirations of the women managers changed during the past five years?
9. What barriers/hindrances do the women managers think they will encounter in the future that will hinder their career progression?
10. What actions do the women managers think they will have to take in order to continue to advance in their careers?

Methodology

The major method of this research study was the individual case study involving in-person and/or telephone interviews. An interview schedule was developed to use as a guide in collecting the data from the interviews. The case studies required the collection of very extensive data in order to produce an in-depth understanding of the career development and aspirations of the women managers that were being studied. The data provided by the women managers during the interviews consisted of words in the form of rich verbal descriptions (qualitative data), as well as quantitative data. The quantitative data were utilized to provide the basic research evidence while the qualitative data were used to round out the picture and provide examples.

A study advisory committee, made up of business educators and people from business and industry, reviewed the interview schedule and study procedures. Also, a pilot study, involving a sample of women managers in business firms, was conducted for the purpose of determining content validity and appropriateness of the interview schedule. There was agreement by the study's advisory committee and the pilot test participants that the interview guide and the data being collected were appropriate for meeting the objectives of the study.

Data Sources

The researcher conducted in-person and/or telephone interviews with the same 30 women managers who participated in the first phase of the study five years ago. The majority of the women managers worked for Fortune 500 companies and were located in California, Illinois, Indiana, Michigan, Missouri, Nebraska, Ohio, and Texas.

From March to June, 1994, in-person and/or telephone interviews were conducted with the 30 women managers in business firms. The interviews focused on the career development and aspirations of the women managers during the past five years. The interviews lasted from one and a half to two and a half hours. On the average, the interviews lasted two hours. The interviewer/researcher took extensive notes during each interview with additional write-up occurring after each interview.

The data from the interviews were content-analyzed. Content analysis is a research technique for systematically examining the content of communications--in this instance, the interview data. Participants responses to the interview guide questions and the related issues that arose during the interview process were read and put together as complete quotations and filed according to the topic or issue addressed. The content analysis of the interview data was completed manually and with computer assistance using the software program Excel. Responses were then analyzed thematically. Emergent themes were ranked by their frequency of mention.

To assist in ensuring the reliability of the interview data collected, the researcher invited a career development professional to review the interview data from three case studies and identify the various career development factors identified in the text. Reviewing each case study, the career development professional identified the same factors as the researcher.

Conclusions

The following are some major conclusions based upon the findings of the study.

1. The majority of the women manager are still employed for the same companies that they were five years ago. Although some of the women managers have transferred to different locations demographically, the majority of women managers are still employed for the same company at the same location.
2. The training most frequently pursued by participants during the past five years include: management development; interpersonal management; diversity management; total quality management, and strategic planning. The areas of training that were not mentioned by the women managers five years ago included: diversity management; total quality management; and strategic planning.
3. Five years ago the majority of the women managers ultimately aspired to attain top level management positions. Currently, the majority of the women managers have not attained the position to which they ultimately aspired. However, the majority believe they are progressing toward the position to which they ultimately aspire. But, the majority do not believe they are progressing as rapidly as they think they should.
4. The six major factors identified by the women managers as assisting them in attaining and/or progressing toward the positions to which they ultimately aspire during the past five years include the following: Demonstrated competency on the job (produced high quality work); Good interpersonal/people skills; Perseverance/persistence; Given the opportunity and support by company; Willingness to learn new things and take on new responsibilities; and Hard work. Many of these factors are similar to the ones that assisted the women managers' advancement earlier in their careers.
5. The actions most often mentioned by participants as having to take in order to continue to advance toward position ultimately aspired included: continued to demonstrate competency on the job (produced high quality work; was more assertive/aggressive in communicating accomplishments and needs to key individuals; participated in activities that insured exposure/visibility; took on new challenges/was flexible/took risks; and continued education/training (updated skills on an on-going basis).
6. The six major barriers encountered by the women managers in progressing and/or attaining the positions to which they ultimately aspire during the past five years include the following: Being a woman; Lack of opportunity; Family obligations; Lack of support from boss; Down sizing and reorganizing of company; and Lack of appropriate training. Many of these barriers were different than the ones encountered by the women managers earlier in their careers.
7. The personal sacrifices that participants had to make during the past five years in order to continue to advance toward the position they ultimately aspire included: time with family/children; personal time/free time; social time/friendships; relocating; under too much stress/pressure; and working too many hours at home. Many of these personal

sacrifices are similar to the ones that the women managers had to make in order to advance earlier in their careers.

8. The majority of the women managers continue to aspire to top level management positions and they believe that it is either very realistic or somewhat realistic that they will acquire these positions.

Educational Importance Of The Study

In the 1990s, women are breaking down the stereotypes of male/female jobs and obtaining training and experience that should entitle them to succeed in senior level management positions in the year 2000. This study helped determine what factors assisted women managers' career development. It also, assisted in determining if women aspire to attain senior level management positions, and if so, what actions do they think will be necessary to take in order to attain a senior level management position. In addition, it assisted in determining the barriers/hindrances that women managers have encountered, and the barriers/hindrances women managers think they will encounter in trying to attain a senior level management position.

The information obtained from this study can be used by educational institutions to identify better ways to select and train women for management positions. The information can also be used by companies to identify better ways to select and develop women for management positions. In addition, the information from the study can provide women a better understanding of the ingredients necessary for success, and the obstacles they may encounter as they steer themselves toward senior level management positions.

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Corporate Culture: Friend of Foe of Change?

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Telecommunications companies need to change, but the consequences may be specific management strategies, including downsizings. The relationship between change and corporate culture is unclear. This study investigated the characteristics of corporate culture that facilitate and hinder change . Managers agreed that change is necessary for survival but criticized the company's process. They believed corporate culture a liability to change. Survivors of downsizing identified ten characteristics of survivors. Data suggest a cultural lag between technology and social attitudes. Results imply importance of communication and managers.

Deregulated in 1984, telecommunications companies have been blasted from a protective cocoon of government support into the jaws of powerful competitive forces for which they have not been prepared. Business organizations, obliged to downsize the workforce and streamline the jobs, have had no blueprint for successfully accomplishing the task. Furthermore, the pace of disaster has quickened and intensified. The print media scream headlines about the last breath drawn by American companies and about the job losses of American workers. Therefore, the speed and intensity of arising business problems fuel the fear and anxiety connected with the concept of change.

Organizational researchers have extrapolated meaning from the term *culture*, which is a group's ideas, customs, and products (Bennett, 1966) and applied the concept of *corporate culture* to the business world. Employees' shared values, customs, and artifacts are very deep and drive behavior although they are often unstated and unrealized (Davis, 1984). More recent researchers divide *corporate culture* into emotionally charged belief systems and cultural forms or actions by which the *corporate culture* is expressed (Trice & Beyer, 1993).

Understanding Change and Corporate Culture

The relationship of *change* and *corporate culture* may be more expediently studied when one can better understand both phenomena. *Change* may be defined as "conversion" or "replacement" (Random House college dictionary. Urdang, Ed., 1980), but business researchers refer to it as "innovation" (Foster, 1986; Kanter, 1983). The ad hoc group, which is given permission by management to solve problems creatively, is a strong motivator of the *change* process (Peters & Waterman, 1982). Although business methods must be critically evaluated and often changed for marketplace survival, researchers believe in the supreme importance of corporate values in determining the effectiveness of the organization (Deal & Kennedy, 1982; Denison, 1990; Peters & Waterman, 1982; Schein, 1991) Thomas Watson, Jr. of I.B.M. believed that if a corporation is to meet the challenge of a changing world, it must be prepared to change everything about itself except its basic precepts and values (Watson, 1990). Therefore, how an organization goes about the business of *change*, whether or not the management is able to evaluate its *culture* and decide which precepts to alter and which precepts to preserve, and how the very process is carried out become critical issues within an organization.

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practiced anyway. Forty percent of the managers believed that risk avoidance and conformity were the traits rewarded at this company. One person said, " Disagreeing scares hell out of people." Others said that being politically astute and dressing appropriately are the behaviors rewarded here. Behaviors discouraged but practiced anyway suggest there is *change* in the air. There appear to be some challenging upward, wearing casual attire, and risk taking. Although the sharing of information is discouraged, employees do talk to each other about ratings, ranking and salaries. A perceptive manager said, "Information is power, and in an organization such as ours information does not flow well vertically." Word gets around that "pay raises for upper management have been dramatically above C.P.I. (consumer price index) while lower managers have received raises below the inflation rate." As one respondent pointed out, "In such an environment, trust is lost."

Ninety-five percent of the managers pointed out examples of excellence in the company. They named deleting superfluous jobs and incompetent employees, the reorganizing of the marketing division into four four small, customer-focused units, and showcasing best practices.. They mentioned pride in the technical excellence of telephone service and having an ethical image in the community. Nevertheless, 85% of them believed that the company's *corporate culture* is a detriment to *change*.The managers responded to the question, what should the company do to be successful in the external environment into the late 1990s and beyond. The strongest advice came from 50% of the marketiong managers: determining the customer, ascertaining the customer's needs, and meeting those needs must be the primary concerns for the company to be successful. Further suggestions were that the company should become the low cost provider of a broad array of products and communication services. In addition, the company was advised to look to the skills and needs of its own people and to operate at a faster pace. Other advice that did not create patterns was that the company must learn to deal with regulatory issues better, learn to be competitive, and become more flexible. When asked if training and education might become strategies for *change*, only 38% suggested that training could help theoretically. If the company were more supportive of training, it might become a strategy for *change*, one said. Another said, "Training is difficult to get and not current." And finally, "Training is not part of the corporate strategy"; it is often cut in times of economic need.

In the final interview, eleven survivors had made the cut in two comprehensive downsizings. These survivors of *change* listed reasons why they had survived: an ability to work well with others, a willingness to relocate, respectfully speaking what one believes, being a good and logical thinker, having strong experience in a key skill, showing good attitude and performing well, being proactive, being respected by one's superiors, and perhaps being internally directed. One person remarked, "The job I do is more important than the job I have." Sixty percent of the respondents defined survivorship positively. The most important needs of the survivors were listed as: more open communication to reduce confusion and anxiety, and information on behaviors that have led to termination of employees and on behaviors that are leading to survivorship. They need respect and support as well as interesting work. They want to continue to learn and grow as well as receive competent salaries and promotions. Most mentioned that in the present environment they must take care of themselves and learn as many new skills as they can. The survivors were asked to comment on the consequences of the downsizing as it related to themselves. One person mentioned "tired and overworked employees." The consequences of downsizing may well be a chance to survive the next downsizing, several believed. All believed that there will be more *change*. One person noted that more people are competing with their own best efforts now. `

Although gender differences and length of service were variables considered in this study and were reported, neither revealed significant impacts on the study.

Results

Relevance of Qualitative Research in Interfacing Change Management and Corporate Culture

Little research has been done on what the characteristics of *corporate culture* are that support the *change* process. If these answers were known, it would become an easier matter to put strategies in place to facilitate *change*, or to consider the long-range task of changing the *culture*. A study to determine some of these answers, therefore, should be inductive and theory-building. Furthermore, "Grounded theory grows out of questions researchers ask about people in specific contexts" wrote Hutchinson (1990, p. 125). The data is then contextual because the participants are studied in their natural setting. The recent literature shows numerous ethnographic studies in organizations (Peshkin, 1993; Wierson, 1988; Zemke, 1989). Peshkin reported on ethnographic research in education, sociology and urban renewal. Wierson 's study was in a university setting and Zemke described multiple instances of anthropologists in corporations.

Methodology

In this mini-ethnography, 20 mid-level marketing managers in a large telecommunications company participated as cross-sectional informants in a series of two interviews on the subjects of *change* and *corporate culture*. In the last interview, 11 of the original group who were survivors of two major downsizings, a specific kind of *change*, agreed to a third and final interview on the subject of survivorship. The original group included 12 men and 8 women. The data were analyzed by the Strauss and Corbin (1990) methods of open, axial and selective coding. Gender differences and length of service were variables considered in the data analysis.

Trustworthiness of the study has been addressed through attention to the four criteria of Lincoln and Guba (1985). These researchers suggested that credibility, transferability, dependability, and confirmability be carefully considered. Activities that led to credibility included prolonged engagement, triangulation of data, and persistent observation. Triangulation actitivies involved administering an etic instrument, Management Inventory on Managing Change. (Kirkpatrick, 1989), to each respondent. Forty-three percent , 28 out of 65 questions, of the inventory, related directly to questions that were used in the interviews. Secondly, analyzing cultural artifacts (memos and newsletters) of the company in order to determine whether the data found there supported information that was received in the interviews was another method of triangulation. Concerning persistent observation, this study lasted between 18 months and two years. It is not suggested that results of this study be transferred to other telecommunications companies, but it is possible that results may extend to other managers in this company at the same level as those who participated in this study. Confirmability was verified by the presentation of data results from the first two interviews to those eleven subjects who were interviewed a third time.

Findings

All participants defined *change* as a process of opposing the norm or creating a modification in behavior and outcomes. One informant said that in today's business environment,change is "taking a business that is top down and making it bottom up." He was, in all probability, referring to the directional flow of information. All informants discussed the causal conditions of *change* in the telephone company as being either the company's critical need to survive in, or as developing skill for operating in, the competitive environment caused by divestiture. Questions, such as who is my customer/ what products does he need/ how can I best meet those needs reveal critical marketing issues with which the company's marketing division is grappling. Forty-five percent of the respondents identified the context of the phenomenon of *change* as being within the company, while thirty percent identified the context as being the external environment. Fifteen percent said that it was both internal and external.

Sixty-five percent of the respondents defined an antiquated, bureaucratic corporate culture that is "slow" and agonizingly unrealistic when the need for *change* is immediate. They explained that often smaller companies step in and get contracts while large, unwieldy corporations are trapped in their own process. Furthermore, the company has a habit of hiring outside consultants and ignoring the expertise of its own employees. And finally, most *change* is dictated from the top down. One employee said, "Corporate culture holds this company back."

The respondents discussed the most difficult phase of *change*. Fifty percent said that the initial stages are the most difficult . Included in these early stages may be communication attempts of leaders and employee responses of denial and uncertainty. Other causal conditions include the percerption that resistance surfaces most during this phase, *change* is seen as negative, rumors fly, management is often not perceived as open and communicative, and traditional *culture* fights new approaches. Managers suggested the following strategies for coping: acceptance of inevitable resistance, total openness, carefully prepared objectives, inclusion of employees so that they "buy in," and keeping a long perspective about the potential, positive achievements of the *change*. Forty percent of the respondents thought the implementation phases of *change* were the most difficult. Reasons why this stage may be overwhelmingly difficult include a lack of a well planned initial phase of the project, and a lack of employee commitment to the *change*. Anguish and upheaval in workplace lives of employees accompany the implementation phase because implemenation implies actualization and meeting of objectives, they said. Informants suggested the following as coping strategies: the use of a team for implementation, strong and open communication about the *change*, plans for meeting resistance, and coordinating efforts as well as modeling new behavior.

The respondents discussed the facilitators and the impediments of *change*. Fifty percent believed that communication is the most important facilitator of *change*. Thirty percent believed that the commitment of people and planning in the process are its greatest supporters. Others suggested that competition from the external environment and the changed behavior of leaders are most important. Forty-five percent said that lack of open communication most significantly impeded *change*. Thirty percent said that lack of employee commitment dooms it. The distinguishing difference between facilitating and hindering *change* lies in the human factor, sixty-five percent of the managers believed. Of that group, 54% referred to the commitment of the employees to the process, and 46% mentioned the skill and commitment of the leaders as creating the distinguishing difference between success and failure in *change*. Some answers were insightful but failed to form a pattern . One noted that there may be a division between "trust and the alignment of stated goals and purpose" of the *change*.

Ninety percent of the mid-level managers thought of themselves as important in the *change* process. They saw themselves as providing leadership, providing followership, showing commitment, focusing on growth, being open-minded, advising others, amticipating and planning, improving self-reliance, and keeping perspective. They were critical of upper level managers who do not help their employees grow. Concerning how they dealt with the *change* process, some were rational, saying that they tried first to understand the *change*. A second group said that they primarily focus on the possitive, and accept and commit to the *change*. Finally, there was a positioning group who said that they try to be open-minded, flexible and realistic about whether they can support the *change*.

Although the manager/respondents understood the necessity for *change*, they were critical overall of the company's management style. They suggested that current leadership lacks vision and has not studied the direction into which the company is moving so as to gage and understand that direction. Risk averse leaders, they said, practice the riskiest behavior of all, which is "not to change when things are going well." In addition to *change*, another important area of research for this study was that of the *corporate culture* of the company.

Respondents were asked to identify traits of their *corporate culture*. Then because *corporate culture* reinforces its values through rewards and punishments, they were asked to identify which traits of the *culture* were rewarded and which traits were discouraged but

The data from this study portray a large telecommunications company caught in the throes of *change*. Deregulation struck the telephone marketplace twelve years ago, and this large regional Bell began to try to make its way, sometimes haltingly, but nevertheless independent of protection, into an arena of new competitors, unusual mergers and customers hungry for innovative products and services. Its survival in this marketplace has been predicated upon a necessary journey of *change* in technological, marketing, financial and employee-related objectives and procedures. As the company has restructured its processes, it has become clear that specific characteristics of its *corporate culture* also must change before it will be able to thrive in the new, competitive and global market environment.

Just as surely as the above conditions have confused employees and caused anxiety about issues in *change*, the *corporate culture* grounded in a traditional and monopolistic environment has limited *change*. Sociologists express a theory of Culture Lag "when different parts of a society fail to mesh harmoniously" (Wallbank & Taylor, 1960, p. 9). It seems that Cultural Lag may also be evident in *corporate culture* "when there is also disparity between technological advancement and . . . social attitudes" (p. 9). Researchers believe "the drag of tradition and inertia on the part of well-meaning persons can at times be as dangerous as the overt acts of tyrants and dictators. (p. 9). One respondent said, "Because we don't reward people on the right things, people will spend their whole lives doing dumb things just to meet their goals, but to buck the system is very, very, very difficult." Although this research is a description and not an indictment, it does appear that there is an estrangement between upper management or company leadership and mid-level management. There may also be a gap between those involved in the technology of the company and those involved in the business and marketing processes. The Theory of Cultural Lag seems to extend to *corporate culture*.

Because information is power, management at this company seems to restrict the flow of it; therefore, the lack of communication is a barrier to *change*, and some employees find it difficult to trust the company. The *corporate culture's* having been paternalistic has bred a sense of entitlement into many. In addition, employees have had very narrowly defined roles, similar to those found in the milirary model, which has prevented flexibility, creativity and openness. Respondents in this study have agreed upon the supreme importance of open communication during *change*.

In addition to searching for whether or not *corporate culture* is supportive or destructive to *change*, this research project, which lasted between 18 and 24 months, has provided support for the importance of mid-level management in the process of *change* . Most managers agreed that *corporate culture* , which is a stabilizing force, resists *change*. The respondents revealed a manager group who are powerful concerning whether or not the *change* process is effective. Shared values of the managers include being profit-driven, quality-driven, and customer aware. Their needs are communication, trust, and having personal responsibility. In order to deal with *change*, the survivors refused to submit to anxiety. They tried to improve and become more self-reliant. They were pro-active and retained a sense of humor. They believe in open communication and in bringing employees together skillfully to get initial buy.-in for a *change* project.. Practices hindering *change* included lack of communication, leaders not modeling new behavior, and the lack of comprehensive goals and purposes. Successful *change* interventions, they said, involve human and cultural factors. The leaders must align the feelings of employees with corporate objectives. *Change* survivors are flexible, team players, focused, cognitive and logical thinkers, and respected by superiors,. They want support, appreciation, and salary increases.

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The Use of Staged Events to Mobilise Change - as Seen from the Participants Viewpoint

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This paper considers the use of 'Staged Events' (Workshops, Team Sessions, etc.), as processes that contribute to the mobilisation of change. It attempts to identify some of the significant factors for the participants, and to apply this knowledge to improve the application of such events, and hence contribute to the transformation process. A model describes significant issues for the group in the study, and offers a potential checklist by which practitioners may review their own approach.

This paper considers the use of Staged Events within the context of change, and specifically how they are used as a vehicle to mobilise support and drive within an organisation. As Hammer and Champy (1993, p158) highlight, there is often the need to develop an "ongoing communication barrage to enlist the entire organisation in the reengineering crusade". Often, the change community will seek to deliver this barrage through the use of workshops, team events or other such group occurrences. Where people are brought together to share a common motivational experience.

This paper is the first of a series of studies that seeks to explore such phenomena, and to offer a model that may help to improve their application within the organisational transformation process. The subsequent three papers will (i) seek to determine any underlying theoretical viewpoints, (ii) offer a perspective of such processes from the practitioners standpoint and (iii) try to understand perceived value from the sponsors position.

Background

The study took place in a large multi-national organisation, where a re-engineering project had been underway since 1992. A number of managers from a head-quarters team were invited to a one day workshop, an event that was designed to underpin a company wide mobilisation process. The event was initialised by the external consultancy group (supporting the BPR programme) and led by the firm's senior managers. The primary aim was to *"engage the senior managers in mobilisation events.... so they become the advocates of change"*.

The event was structured around two half day sessions, the first outlined the progress of the project. The afternoon session was based around a syndicate exercise, one that sought to involve the participants in making decisions on a number of key elements within the programme. Each of the three syndicate teams was chaired by a senior manager from the unit, and the decisions of the group were to be used as part of the overall reengineering process.

Although the workshop was designed to stimulate involvement in post-event activities, the only people who actually undertook any specific action after the event, were those teams who were directly involved in the project. The rest of the participants did not undertake any post-event work, little guidance was offered on how they could to contribute to the programme.

Methodology

A naturalistic approach was adopted with this study in order to use a process that attempts to understand the nature and meaning of an experience for a particular group of people (Glaser & Strauss 1967), particularly using an open ended approach of theory building as opposed to testing. Additionally, the

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desire to understand the holistic viewpoint, the fact that the researcher was in a participant/observer position, and the *a priori* values that would be of significant influence (Lincoln and Guba, 1985) influenced the methodology decision. Of additional interest, was the wish to understand some of the forces that operate within this type of phenomenon. (Miles and Huberman 1994, page 4), and to develop an understanding of the critical factors that affect the process.

Whilst some degree of generalisability was desirable, the author accepted the view offered by Erlandson et al (1993, p 13) that *"No two social settings are sufficiently similar to allow simplistic, sweeping generalisations from one to another"*. However, the aim was to develop a semi-transportable model, one that might be of use to other researchers or practitioners.

The base data was obtained by interviewing a group of participants, some two weeks after the event, and each interview was recorded on audio tape and subsequently transcribed in readiness for detailed analysis. A summary version of the interviews was distributed to the interviewees to confirm that it was representative of the discussion. Data examination took the form of simple content analysis, which attempted to derive both a qualitative and quantitative factor when studying the transcripts. The qualitative element was used to derive a set of categories from the statements made by the participants, whilst the quantitative element was an underlying measure to try to get an intuitive feel for the strength of feeling around each emergent category. This recognised that such a form of examination might give only a view of the broad concepts within the data. It did not deliver any understanding as to *'why'* the ideas and feelings occurred, and how the different interpretations arose (Easterby Smith et al, 1994, page 108).

Definition of a Staged Event

The title *"Staged Event"* has been chosen quite deliberately. Within any change programme, there will be numerous people related activities, all of which are typically designed to bring about support for the change initiative. However, this research seeks to focus on those Events that are designed specifically to *"Mobilise"* change.

The proposition is that this tool is one that is often used in industry, albeit one that has received only limited attention by academics and practitioners. Kanter (1983, p229) illustrates the practice by highlighting what happens once people need to develop a broader level of support across an organisation, where it is highlighted that *"A large number of additional players may become involved at this point: when the action of implementing the innovative idea begins, the stage may be quite crowded, as the project team workers are collected and forged into an operating entity"*.

Beckard and Harris (1987) offer a similar view, with events called *"Organisational Confrontation meetings"*, where managers from across the company meet to develop action plans for improvement. Dannemiller and Jacobs (51) discuss the use of such a process at Ford, where between 50-200 people were involved in 5 day events, specifically to deliver an organisation wide quality circle.

Another variation on this theme was offered by Axelrod (1992) where the workshop process is specifically used as the change tool as opposed to a support mechanism. In this instance a process called the Conference Model™ is used, where the event pulls stakeholders together from across the organisation to actively take issues and resolve them over a dramatically shortened timescale.

Barrett et al, (1995) highlighted General Electric's use of the *'Work-out programme'* to spread the new organisational values. These events offered the opportunity to meet and discuss issues, that would in turn create a process to act as a catalyst for change. Posner and Rothstein (1994) show how the use of such events has been used by the USA's Department of Labor, where a two day retreat for senior managers was used to deliver immediate departmental improvements.

From a practitioner's perspective, the more radical use of workshops is shown by the approach taken by Gemini Consulting group. Gouillart and Kelly (1995) describe their use of the *"Valley of Death"* executive workshop. This is a team event that is designed to mobilise senior management teams. The

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experience is designed to be a brutal process, where people are subjected to emotional attacks on the performance of the company, a process that is explicitly painful and uncomfortable.

This limited number of examples highlights a number of ways that Staged Events might be dimensioned. Taking two simple variables; *'who is giving'* (Presenters) and *'who is receiving'* (Participants) shows how the context and content of the event may differ to a large degree:

Feedback and Review -Where the participants are being used as a repository of knowledge.

External Focus - Combination of multi-level groups that are brought together to listen and respond to a mobilising force that originates from outside the organisation

Problem Solving - An event whose purpose is more collaborative in nature.

Mobilisation - Where the change agents are seeking to stimulate action or desire with a discrete set of organisational actions.

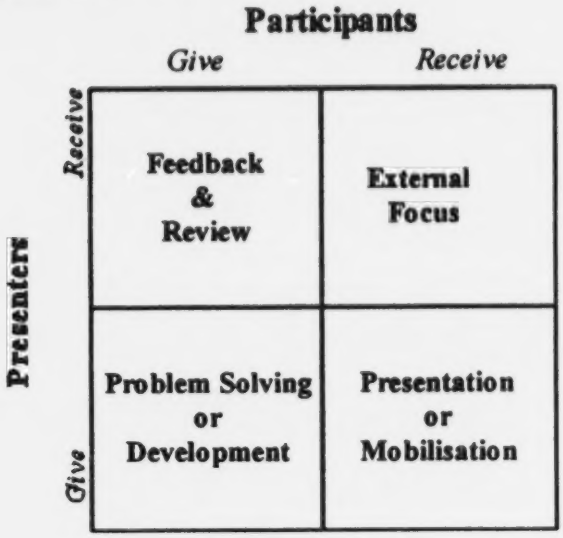

Figure 1: Staged Event Positioning Model

The study focused on the Mobilisation quadrant, where senior managers take deliberate steps to generate a force for change throughout the organisation. This might be typically linked to the Unfreeze and Transform phase of change (Lewin, 1951, Schien 1988), where there is a need to move forward once the status quo is unfrozen.

With the research taking an emergent form, there was some reluctance to build a formal definition of a staged event. However, some clarification might be offered by developing a clearer understanding of each of the words. *"Staged"* is a very specific application, with the suggestion of a platform or theatre, a place where traditionally there will be those who deliver messages and those who receive them. Typically in a single direction (presenters to receivers), but one that might include a two way approach. *"Event"* is very much about a notable occasion that will result in a defined outcome (Collins, 1983), where the suggestion is one of excitement and energy. These might be combined to deliver a casual description of a Staged Event: *-a pre-determined gathering of people, where one actor is presenting to other actors, with the intention of delivering a new frame of reference, and hence creating some form of sustained momentum for action and to ultimately move to the desired state.*

Interview Findings

The interviews were conducted in two separate phases, first the participants were interviewed, following this the workshop owner was interviewed, and topics were discussed around the issues raised by the participants.

Following the transcription of the interviews, each individual's response was broken into segments of critical statements. These statements (158 in total) were then used to intuitively derive 14 separate categories.

1. Target Audience	8. Belief in the Message'
2. Pre-Event Knowledge'	9. Personal Impact
3. Pre-Event Communications	10. Event Value
4. Pre-Event Expectations'	11. Post-Event Transactions
5. Presenter	12. Post Event Activities
6. Selling the Story	13. Story Retention
7. Theory Translation'	14. Mobilisation

Table 1 - Emergent categories.

These have been outlined with a descriptive narrative and a representative sample of the various responses. Each participant is indicated by the use of a letter (A-H).

Target Audience - The participants responses suggests confusion over their fit at the event. Comments such as "*We were too diverse for the director to be able to focus down on us (B)*" and "*I would have said it was better to do it on a project by project basis (F)*", might indicate that there was scope for either more focused participant selection, or clearer event positioning.

Pre-Event Knowledge' -A number of people had prior experience of the change being proposed at the event. Although this might be expected at many settings, it seemed to impact upon some participants willingness to accept the proposed ideas. A direct indication of this is "*What was said in the workshop about the areas that I worked in previously were extremely overblown (A)*" and "*Having been involved in the project, I know that many of the benefits were not incremental at all (F)*".

Pre-Event Communications - Two issues arose regarding communications. First the fact that only limited pre-event communication had taken place, "*Within (my team), there was virtually nothing (pre-workshop communications)* (A)". Secondly, "*I don't think communication was that good, if I had not been (previously) involved then I would not have understood that much about the project* (E)", raises issues about the appropriateness of the communication that did take place.

Pre-Event Expectations' - When asked about their pre-expectations, the response varied, ranging from, "*I was a bit suspicious, and not particularly positive* (B)", to "*I was looking forward to the workshop* (D)".

Presenter - Both as part of the interview process, and in general background conversation after the event, the role of the presenter often came to the fore. Comments such as "*the presenter was evangelising, and I don't like that* (A)" and "(the other) *presenter was more down to earth and realistic* (A)", *the presenter made me feel more positive" and "the presenter....jumped all over the place (B)".*

Selling the Story - Emotional triggers seem to have been set off in reaction to the presenters statements. Declarations of, "*if you don't make it work, I will take you down with me*(B)", "*you shall do this, rather than why*(C)" and "*You were subtly being told to support it* (B)",*suggest* a feeling of coercion with the change, although others saw the style as being more participative, "*it was asking me to ensure that I gave my support, don't think anyone was directing me to do anything*(F)".

Theory Translation' - There was a strong reaction to the syndicate exercise, indicated both during the interviews and as part of the formal workshop feedback process. Typically all of the people felt that it was an inadequate process, that contributed little to either their learning or the progression of the programme. The responses included, "*I thought the syndicates were a bit unfocussed* (C)", "*The afternoon session was a complete waste of time, a childish nonsensical session, where the senior manager left half way throughout the event* (D)", and "*getting all those people together in a room, it didn't seem to have any sort of value* (H)".

The comment, "*The syndicate exercise was positioned as a chance to explore how to take things away and implement them, I don't actually think it achieved that objective* (A)", reinforces the need to ensure that intrinsic and extrinsic value is derived from any process which seeks to deliver understanding on an operational level. This was also supported by the event leader, who said "*I guess with hindsight the syndicate wasn't entirely fruitful*".

Belief in the Message' - To what extent did the participants truly believe the messages offered at the event? The comments suggest that despite all of the valiant efforts by the presenters and the change agents, the attendees just did not give credence to what was said. Indicative statements include, "*I still thought claims were being made that were not quite true, It did not make me think that people were being honest* (F)" and *"Is it, you are the senior managers and we are going to brainwash you to brainwash everyone else.* (B)". There were some fairly emotive words used, which questions the extent to which trust is a barrier in the mobilisation process.

Additionally, the event manager's perception of the *"hard and valid financial data"*, (presented in support of the change) is not one shared by the participants. There appears to be a perceptive mismatch in terms of supposed benefits of the project. This is suggested by the event leader's comment, "*they have got very clearly stated benefits with very large pound signs"*, and the counter comment *"The financial savings numbers have always been banded about but I never really believed them(*H)".

Personal Impact - It is interesting to note the responses in totality, where some of the respondents felt that the content of the workshop would have little effect on them personally. This contrasts directly with the comment by the unit manager who felt *that "a number of particular recommendations are very relevant to us"*. Comments by the participants such as, "*I do not know specifically what I am expected to do now* (C)", *"My day job is not impacted by it* (D)", *and " No, I don't see any impact on us at all* (B)", tend to neutralise the top down view. Some contrast originated from a group of participants who indicated a willingness to support the change, but were unsure as to what they should be doing, "*getting an understanding of what it means more to us and how we need to build it into our job* (E)", and *" if it came to the crunch I would give something like that more priority than I had in the past* (H)".

Event Value - Although a group of people felt that the workshop was of limited value, those who perceived some benefit, placed greater emphasis on the space and time aspects. The gain seems to be from making a committed date in the diary, and physically meeting with people. Phrases like *"forces you to set aside time* (F)", "*easier to receive information* (D)" and *"able to ask questions* (B)" were common, with little being said about the value to them in terms of learning or understanding.

Post-Event Transactions - Little discourse seems to have taken place once people have left the event and returned to the office. Unless a formal process was instigated, (like a team meeting to review the output), few transactions seemed to have occurred. Indications from the responses are, "*Have not really (spoken to other people) no (D)", "Not discussed it (the workshop) a great deal* (H)", and "*I haven't spoken to them (colleagues about the workshop)* (B)". Where dialogue has occurred, it seemed to be very low key, *'Yes, I have spoken to some colleagues briefly in passing* (F)".

The only area where there was a degree of conversation was highlighted in a previous table, when the grapevine was awash with the provocative phrases that were used by one of the presenters when trying to sell the need for action. However, further research would be required to determine if this negative discourse actually delivered any mobilisation within the organisation.

Post Event Activities -The overall feedback suggests that the point of cognitive closure was at the end of the workshop, since little further action seems to have been instigated by the participants. Phrases such as, "*There wasn't enough to take away and do off your own back* (A)", *"there needs to be some kind of tangible follow on from the workshop* (A)" and *"There wasn't really anything of use to go away with really, there was no action for me to do, or at least I cant remember any* (E)

Story Retention - People could not even list three key messages, let alone any of the more complex components after the event. With comments such as, "*You know, I cannot remember the key concepts at all* (A)", *"Difficult for me to remember* (D)", and "*I am finding it quite hard no to think back and remember detail from the workshop* (H)". One point raised by a participants is that any post event messages tend to be corrupted by return to the work place, "*The fundamental thing is that you go and are bombarded with a lot of information, and, although at the time it is all very interesting and you think yes, yes, yes, half an hour later you come back to the office and start worrying about your day job* (E)"

Mobilisation - At the end of the day, did the event *'make a difference'*? One theme that surfaced is the perception that the proposed ideas did not integrate with existing processes, "*What happens is that you have your day job and this is almost something separate*(F)". Of the eight interviews, three people responded (un-prompted) with the use of the words "*Day Job* (D, E & F)". Is this an issue, where people do not readily associate the new paradigm with their existing schematic view of the world.

Points for Consideration

To what extent does the Physical Event (the co-location of the participants) tend to take priority over other aspects of the process. Do the Pre and Post activities receive as much focus as the actual event, and to what extent can the point of interconnection between the three stages appear seamless and transparent to the participants.

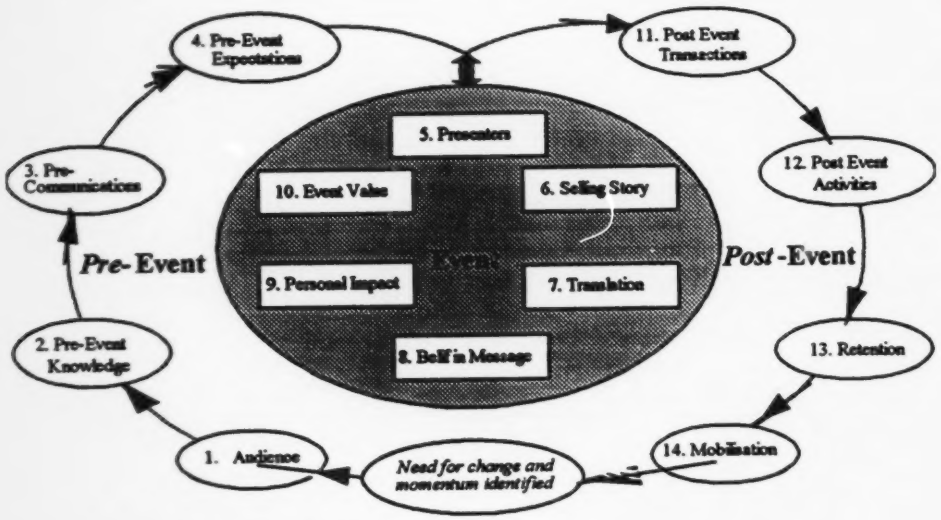

Figure 2 - Staged Event Model

The following discussion considers some of the issues that surfaced from the responses.

Target Audience: The responses highlight the issue of participant selection. The responses tend to suggest that some people were unclear of their positioning at the event, and were raising suggestions as to alternative selection criteria. Hence might some form of filtration or segmentation be applied to avoid a sheep-dip approach and to gather people with a common frame of reference? Where this is impractical, would it make sense to work on the assumption that the participants will have a diverse view on the subject being presented and design the event structure accordingly?

Pre-Event Knowledge: How will the knowledge base of the audience impact upon the process? In this study, the pre-event experience clearly prevented some people from accepting the proposition offered by the presenters. Additionally, there is a possibility that the doubt expressed by the knowledgeable participants will have influenced people who were not sceptical at the event.

Pre-Event Communications: The responses suggest that communication prior to the event were suspect. The issue seems to be, how did this situation impact upon the recipient's ability or willingness to respond to new ideas. This highlights the need to ensure that the communication process commences prior to the event.

Pre-Event Expectations: As individuals, people will arrive at the event with a range of differing expectations or Frames of Reference. These will have been based upon discussions with colleagues,

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rumours, speculation, disconnected pieces of grapevine information or possibly historical experience. One can either simply accept this potential range of cognitive perceptions, or possibly attempt to understand them in advance of the session and consequently manage them within the end to end process.

Presenter: There is an indication that the perception of the presenter impacted on the received message. The style adopted, words used, and perceived credibility of the person all seemed to play a part. However, whilst some people felt that certain statements were aggressive and autocratic, others perceived them as being acceptable. Hence the dilemma, not being able to be all things to everyone, how can the presenter adopt a style and approach that can facilitate the maximum level of support from the audience. The comments also surface the issue of demonstrating perceived senior management backing. In reality does it become detrimental to use senior managers to give the illusion of corporate support if they have little credibility with the audience?

Selling the Story: This category surfaces issues around the motivational style used at the event. Should a coercive form be applied, or is it better to focus on involving people and gaining commitment through participation and group involvement. How can a balance be established that doesn't result in the alienation of people who are more responsive to an alternative approach.

Theory Translation: The use of a team exercise to operationalise the theory did not appear to work. Potential issues included, where syndicate exercises, group discussion or case studies are used, can the design be tested or piloted in advance of the event; where the participants are expected to take decisions during the process, is it in context with their normal decision making expectations. Finally, can the implementation process of any such decision be clearly stated?

Belief in the Message: The participants did not appear to believe many of the messages delivered at the event, and this seems to have impacted upon its effectiveness. In this situation, little trust has been facilitated within the context of the event. People were not happy to simply accept words and numbers that appeared on a slide, although interestingly, they were not prepared to voice their distrust during the event. Has this lack of trust , and fear of raising such dissent led to a form of '*pseudo change*', where the revised ideas are not internalised and no schema modification takes place?

Personal Impact: People were quite unclear as to the impact of the event on their daily activities. How does such a disconnection occur, where people are unable to either state what aspects need to happen and more importantly what they need to do on a personal level? The suggestion is that without such a clear personal buy-in, there is little chance that the mobilisation for change will ever take place.

Event Value: Is the value of the event to the participants understood? If so, is it in terms of extrinsic or tangible benefit, or possibly intrinsic feelings?

Post-Event Transactions: The analysis tends to imply two things, little was being spoken about the event, and the content of the organisational dialogue remained unchanged. The lack of modification in the discourse seems to reinforce the points made earlier, that little would happen because the need for change had not been internalised.

Post-Event Activities: Have people left the event with a public commitment to take some significant action and is this to be reviewed as part of the existing activities?

Story Retention: Can the delegates clearly describe the key messages or the story line. If not, is it possible to reinforce the story after the event.

Mobilisation: At the end of the day, has the event *'made a difference'*?. If one assumes that the end purpose of the mobilisation process is to actualise a change in peoples cognitive view, then to what extent does can the change agent deliver this?

Further Research

Clearly, whilst this study offers a snapshot of the phenomena from a participant's perspective, a richer understanding will be obtained by considering altenative perceptions. The next stage will be to unravel an awareness from the standpoint of the Practitioner, the Change Sponsors and the Theoretical Literature. The primary theoretical areas that are suggested from the initial study are:

Cognitive Reframing- to what extent are such events affected by the cognitive map that people have before and after such events?

Organisational Discourse- In what way does the role of conversation after the event act to enable or restrict organisational mobilisation?

Organisational Trust - In what way does the trustworthiness of ones' peers and senior managers impact upon the event? Is trust a critical factor within the mobilisation process, or can events be operated without significant concern about such issues?

The practitioner's views will be developed in partnership with a number of leading UK consultancy firms. The sponsor's viewpoint will be formed by working with senior managers to understand their perceived value on the use of such events.

Epilogue

I am struck by the way that almost simplistic issues have surfaced as part of the analysis. There is little here that any proficient manager or change agent would disagree with, and would possibly say that they already account for. However, this event was designed by professional consultants, managed by experienced senior managers and attended by capable and qualified people. So (I wonder) what went wrong?

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Systematic Agreement: A Theory of Organizational Alignment

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Organizational alignment is a concept often mentioned in HRD models but rarely explained in detail. A theory of alignment addresses this gap. Organizational alignment is the extent to which strategy and culture create an environment that facilitates achievement of organizational goals. Well-aligned organizations apply leadership and HRD to create systematic agreement between strategic goals, tactical behaviors, and the organizational culture. Strong alignment thereby increases the performance of individuals, processes, and the organization as a whole.

In human resource development, practice often leads the development of theory. Reflective HRD practitioners frequently seek to develop convincing and effective models that will help them understand and address organizational performance issues. These practitioner-driven models have solid foundations in experience but often lack a solid theoretical basis to explain how, why, and under what conditions they work. In order to develop better models, practitioners and scholars must be able to thoroughly test existing designs. As scholars and reflective practitioners develop theory, they are better able to identify the strengths and limitations of the current models and to generate the information needed to refine and improve practice. Until now, performance improvement models that rely upon the concept of *organizational alignment* have lacked this necessary theoretical background.

Organizational alignment is the degree to which an organization's design, strategy, and culture are cooperating to achieve the same desired goals. It is a measurement of the agreement or relative distance between several ideal and real elements of organizational life. Strong alignment requires agreement, rather than conflict, between strategic, structural, and cultural variables. Almost by definition, an organization that is well aligned is an efficient organization. Just as misalignment of the wheels of an automobile causes inefficiency in its driver's efforts to move in a straight line, misalignment of an organization's internal guidance systems causes inefficiency in its attempts to achieve its goals.

Some HRD models state that positive alignment can be created by linking activities and processes to the organization's strategy. Proponents of these models suggest that we can improve performance by ensuring that the output of each organizational process contributes to achievement of the organization's strategic goals. The reasoning behind this suggestion is that these activities and processes should be intentionally designed to increase their usefulness and contribution to performance (National Institute for Standards and Technology, 1994; Robinson & Robinson, 1989; Rummler & Brache, 1990; Swanson, 1994). Because performance at the organizational level is largely guided by strategy (Pearce & Robinson, 1994), the component activities and processes of the organization should be designed to contribute to the achievement of strategic objectives.

Other models that use the term organizational alignment look at the agreement between an organization's culture and its chosen strategy, goals, and planned activities (Tosti & Jackson, 1994). The Malcolm Baldrige National Quality Award and Minnesota Quality Award criteria contain a similar assumption, even though they also prescribe linking activity and systems to strategy (Minnesota Council for Quality, 1994; NIST, 1994). In these models, the goal of the HRD activity is to increase the agreement between the levels of organizational strategy and their corresponding levels of cultural belief and activity. Increased agreement on each of these levels leads to increased individual, team, and organizational performance. As in the other models, alignment revolves around a link between strategy and behavior.

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Current models that incorporate the concept of organizational alignment offer simplicity and common sense, but do not explain why alignment works, how it can be measured, or how it can be created or improved. While these models may help organizations measure and improve performance in a general sense, their assumption that strong alignment is desirable has not been backed up with either theory or rigorous research. This paper offers a theory of organizational alignment that addresses some of these missing areas in the theoretical foundations of HRD and offers the possibility of testing the models of organizational alignment presently in use.

Defining Organizational Alignment

Organizational alignment is a descriptive concept referring to the extent to which the strategy, structure, and culture of the organization combine to create a synergistic whole that makes it possible to achieve the goals laid out in the organization's strategy. It is a measure of degree, ranging from complete opposition (-1.00) to perfect harmony and synergy (+1.00). As a continuum, therefore, it is impossible to *create* alignment, but only to *improve* alignment within an organization.

Strong organizational alignment implies that the strategy, structure, and culture of the organization create a net probability of achieving the strategic goals that is greater than random chance would indicate. Weak alignment (or misalignment) creates a net probability of goal attainment that is less than chance. The greater the degree of alignment, the higher should be the corresponding probability of success. Since the practical business purpose of all for-profit and most not-for-profit organizations is to remain viable and grow according to the requirements of strategy and their environments, strong organizational alignment should be highly desirable.

Strong alignment indicates an increased probability of organizational goal attainment because it serves as an indicator of cooperation, efficiency of human activity, and the degree that individual or group behavior within the organization contributes toward the strategic goals. If an organization's leadership and HRD processes can systematically create agreement in each of the four *domains* of alignment then they should enjoy a high level of internal organizational performance that results from the benefits of such cooperative activity.

The Theory in Brief

Organizational alignment is the extent to which there is agreement between strategy, structure, and culture within an organization. This agreement creates an internal environment that facilitates achievement of the organization's strategic goals by removing internal barriers to cooperation and performance that would otherwise reduce the efficiency and effectiveness of work toward those goals. The broad concept of organizational alignment operates in four distinct, but interrelated, domains.

Design Domain of Alignment (Cascade of Goals). Agreement between the goals of different levels of activity within the organizational structure describes the first, structural domain of alignment. Well-aligned organizations create a rational *cascade of goals* for key processes, subprocesses, teams, and individual jobs so that the output of each process or activity contributes directly to the goal attainment of the process level of which it is a part (Rummler & Brache, 1990; Swanson, 1994). Members of the organization systematically design the organization's processes in this way to maximize efficiency and to reduce barriers to performance. This cascade of goals creates a shorter path to attainment of the organization's strategic goals than that of an organization designed for other process goals or allowed to develop without any systematic design of its processes.

Cultural Domains of Alignment (Values & Norms). The match between elements of strategy and organizational culture define the second two of four domains of alignment. Well-aligned organizations use an effective leadership process that sets strategic goals, suggests appropriate tactical behaviors to achieve the goals, and influences the organizational culture to support the strategy. Because cultural values and norms have a stronger, more pervasive effect on actual behavior than rational planning (Pearce & Robinson, 1994; Schein, 1990), the degree

of agreement between the organizational culture and the strategy directly influences the ease with which the organization may achieve its goals.

Agreement between cultural values and the values implicit in the strategy facilitates acceptance of the strategic goals by the organization's members. This acceptance occurs because the members of the organization are already predisposed toward the cultural values and are more likely to accept goals that are in accordance with those values. Similarly, agreement between planned behavior (or *tactics*) and the cultural behavior norms facilitates the direction of actual behaviors toward attainment of the strategic goals. Leadership and HRD practitioners within the organization can affect these domains of alignment by selecting appropriate goals and tactics and by exerting influence on the organizational culture.

Operational Domain of Alignment (Ideal & Actual Behavior). Agreement between the actual behavior of an organization's individuals and processes and the behavior that is required for attainment of the strategic goals is the fourth domain of alignment. Alignment of this domain is an indicator of the degree of operational *goal-directed behavior* demonstrated by organizational members and processes. This domain is more of a measurement domain of alignment than one that organizational leadership or HRD practitioners can manipulate directly. As such, it serves as a corroborative check on the other three domains of alignment. If the actual behavior is in agreement with that required to attain the strategic goals then overall organizational alignment within the other three domains is likely to be strong and should result in successful organizational performance.

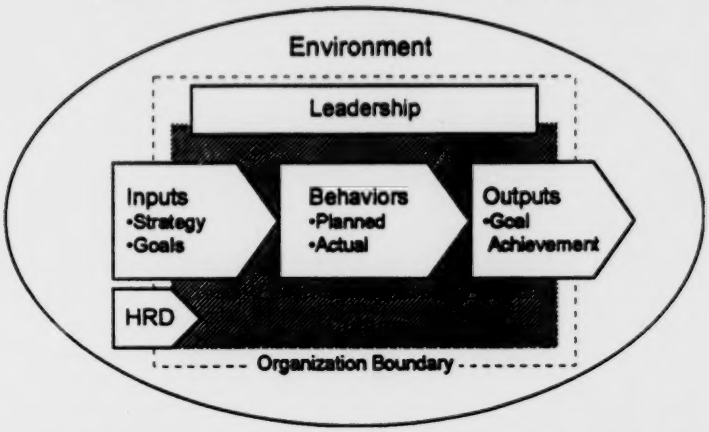
Dynamic Relationships and the Alignment Model

The construction of this theory is based upon a general systems theory view of organizations. Under this view, an organization exists as a purposeful collection of processes within an environment. Leadership, organizational culture, human resource development, and the environment serve as influences on the basic input-process-output system (Figure 1). Human resource development can directly affect inputs (through the design of the organization and the skill of its members) or may affect the organizational culture by enhancing the influence of leadership. Process inputs may include goals, plans, tactics, knowledge, skill, job and process design. The external environment constrains the choice of strategy, which includes strategic goals, values, directions, and tactics. Conditions within the environment make some positions more or less advantageous when matched with the organization's competencies. The external environment also has an indirect influence on the organizational culture as noted in Figure 2.

Organizational leadership bases the strategy on a rational assessment of the environment and the organization's mission, vision, values, and capabilities. It then translates the strategic goals into more specific tactics or operating plans. The organizational processes and jobs may be redesigned around these tactics and plans so that the goals and outputs of each level reinforce the goals and outputs of succeeding levels (Pearce & Robinson, 1994). This creates the cascade of goals with strong alignment at the individual or job, process, and organizational levels of performance (Rummler & Brache, 1990). Other non-traditional means of strategy determination may be used without invalidating the relationship between strategy and alignment.

The effect of organizational culture can be seen as a field that pervades the entire organization and encourages certain behaviors and discourages others (Wheatley, 1992). The degree of agreement between the strategic goals and cultural values determines the degree of support or resistance that the culture will apply to the goals themselves. Additionally, the degree of agreement between the behaviors required by the tactics and the cultural norms determines the degree of comfort that organizational members will have with the required behaviors and, thus, their frequency of occurrence. As a result, the organizational culture can have a diminishing or strengthening effect upon both the goals and behaviors determined by the rational process of strategy formulation (Pearce & Robinson, 1994).

Figure 1. Process Model of Organizational System



A process model of the organizational system within its environment, including the field effect of culture and the presence of leadership and HRD.

An effective leadership process will facilitate cultural acceptance of the goals and behaviors, and a strong human resource development process can act as a multiplier of the effectiveness of the leadership process. Note that this multiplicative relationship implies that an HRD process will have no effect in an organization with an ineffective leadership process.

These relationships combine to produce or inhibit positive organizational alignment that is reflected in behavior (Figure 2). The key points of leverage for HRD are: (a) at the point of strategy selection, (b) at the point where organizational design produces a cascade of goals, and (c) where leadership and HRD can influence the organizational culture.

Hypotheses

The construction of this theory of organizational alignment gives rise to several key, testable hypotheses. The most important of these include: .

1. *The strongest possible alignment within each of the four domains of alignment will produce the greatest probability of goal attainment.* Rationale: Strong positive alignment gives the organization the ability to focus its resources on the desired outputs with greatest efficiency. The efficiency of resource utilization makes the path to the goal states shorter, and

Figure 2. Relationship Model of Organizational Alignment

Relationship model of the variables comprising or affecting organizational alignment, including leverage points (a) the point of strategy selection, (b) the design of cascading goals, and (c) the influence of leadership and HRD on the organizational culture.

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facilitates the behaviors necessary to arrive at the desired ends.

2. *Strong alignment will have a positive effect on the organizational culture demonstrated by improved member satisfaction and productivity.* Rationale: Alignment indicates agreement and harmony between culture, goals, and behaviors. A high level of agreement should produce a work environment relatively free of harmful stress and conflict. It should also facilitate behaviors that lead to accomplishment, improving employees' sense of satisfaction and belongingness.
3. *Organizations that have strong alignment will be more competitive or successful in their environments than those with weaker alignment, given that the initial choice of strategy is appropriate and that other factors not directly affecting alignment do not play a spoiling role.* Rationale: The increased performance made possible by alignment should serve as a competitive advantage over other organizations that are not as well aligned.

These hypotheses should be testable using current empirical research techniques. The author is currently developing an instrument to measure organizational alignment on a scale from -1.00 to +1.00 at twelve observation sites within an organization.

Summary

Organizational alignment is a phenomenon that many authors have touched on in a peripheral way. Several have built it into organizational performance models without offering a complete explanation of what it is and how it works. Many of these models are sound and deliver excellent results when used as intended, and do not suffer in practice from their lack of a theoretical basis for one of their components. The credibility of these models can only be strengthened by providing a solid theoretical foundation for their assumptions. This theory of organizational alignment provides that foundation.

Most models of organizational performance describe ways in which organizations can be more successful. Within this theoretical model, as in others, the organization must develop its own definition of success. While this theory describes alignment and it relationship to strategy and culture in general, specific organizations' strategic goals and tactics will vary. True organizational performance will depend heavily upon selection of strategy that is an appropriate match with all (or as many as possible) of the requirements of its environment. *It is critical to note that if an organization selects a strategy that is not a good match with its environment, alignment will only help it to fail faster.*

Alignment is a measurement dimension that taps into the systematic agreement between forces within an organization. This theory does not presuppose that it is the only important measurement dimension, nor that overall organizational success can be explained by alignment alone. Other researchers have demonstrated that external variables can often have a greater impact upon organizational performance and survival than internal conditions.

Scholars should note that this theory is based in a general systems metatheory that contains dynamic empirical assumptions of behavior and interaction. As such, it ignores some aspects of organizational life that are central to other metatheories. Exploration of alignment from the perspective of social constructivist or organismic science may offer additional richness of explanation that HRD practitioners would find valuable.

Future research should explore the relationship between alignment and organizational success. The concept of alignment presented in this theory is similar to that built into the Malcolm Baldrige National Quality Award (MBNQA) and related state and organizational awards. As more research and experiential evidence continue to confirm the strength and usefulness of the Baldrige framework (Grant, Shani, & Krishnan, 1994; MCQ, 1995), perhaps additional research could determine how using the MBNQA framework creates alignment, and what part alignment plays in the success of award-winning firms. It would also be worthwhile to examine cases in which an organization is highly aligned, but working toward an incorrect strategy choice. Would alignment break down when the organization realizes the implications of its choice? Would the strong alignment make it easier to accomplish an emergency change of

strategy? If alignment reflects the strength of harmony between strategy, structure, and culture, it may have either a beneficial or a harmful effect on an organization's flexibility. More work will be required to answer these questions.

As the world becomes more complex, competitors, customers, shareholders, communities, and employees will place more direct and indirect demands upon organizations. Creating systematic agreement can provide a competitive advantage to those organizations that are wise enough to pursue it. Improving the harmony between organizational strategy, structure, and culture can make it increasingly likely that an organization will reach its goals and be able to thrive amid increasing complexity.

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Pennsylvania Telecommunication Infrastructure's Effect On Telecommunications Employment

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The purpose of this paper is to examine the supply and demand of telecommunications workers in Pennsylvania through the year 2000. The telecommunications occupations specifically looked at are those completers of Pennsylvania's Post Secondary Vocational-Technical Education Institutions.

Human Resource Development personnel will be faced with even greater challenges as they try to locate and maintain a qualified workforce. Issues that will impact the workforce include: changing demographics, the fading of the American dream, and the emergence of a high tech society. There will be a continued growth for what is called knowledge industries which create a demand for a knowledge workforce. Over half of the jobs in the 21st century will require postsecondary education and training. The illiteracy rate will continue to increase. At present employers spend approximately $210 billion annually on training. (Gayle, 1990)

Industry Overview. The telecommunications industry is composed of telephone companies, cable, utilities, satellite and television. Telephone companies are divided into interexchange carriers, which are long-distance telephone carriers; Bell operating companies, which are interregional telephone carriers; and local exchange carriers which are local telephone companies. (Standard & Poor, 1995). The information market place has four major components. These are: private sector owners, makers of information appliances, and information providers. (Henderson, 1994). At present communications lines via twisted pair, coaxial cable, and fiber optics are used to transport voice, data, and video. The infrastructure has been improved through the deployment of digital switches, fiber optics, and SS7 networks which provide out-of-band, packet-switched communications and information transfer between network components to allow for call processing. (Standard and Poor, 1995).

Pennsylvania's Telecommunications Industry. Over the last decade, Pennsylvania has upgraded its telecommunications infrastructure through the deployment of new technologies. The existing telecommunications infrastructure is comparable to that of other areas of the United States as well as other advanced countries. (Deloitte & Touche, 1993). Each county in Pennsylvania contains, on average, approximately 99000 access lines. Of these access lines 67% have touch-tone capabilities, 30% are equipped with custom calling features and 3% have custom local area signaling services. (Cronin, et al., 1995). In addition, 84% of all switching entities are digital switches with fiber being increasingly deployed in interoffice and feeder ports of the local exchange carrier networks.

Pending Legislation

On a hearing before the subcommittee on telecommunications and finance, testimony was given on the necessity of new legislation concerning communications' regulation and support. It was stated that in the future, national security will be determined by the ability of the United States to compete on the information battlefield. Both Japan and the European Community are responding to this new warfare by investing tremendous amounts of money in emerging technologies. Japan's Nippon Telephone and Telegraph Company are investing $240 billion in a capital improvement program aimed at bringing integrated network services to every business in every city of Japan. France's government-owned telephone company has invested $2.5 billion since 1981 (Network of the future, 1989). In addition, China, which currently has 2 lines per 100 people, is planning to increase the ratio to 10 lines per 100 by the year 2000 and to 40 lines by 2020. If only one line per 100 were added, this would represent more equipment than AT&T's current share of the entire U.S. market (Standard & Poor, 1995).

Currently there are three bills dealing with revising the telecommunications industry. The first bill, by Rep. Thomas J. Bliley, Jr., is to promote competition and reduce regulation in order to secure lower price and higher quality service for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies. The measure would lift a

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ban preventing the seven Baby Bells from entering the long-distance market and would break up monopolies in local exchange networks. Another provision would allow local telephone companies to provide cable service either through their own facilities or by collaborating with existing cable networks. In addition, Rep. Bliley's bill would allow cable operators, radio, and televisions broadcasters, and local and long-distance telephone companies to enter each other's market (H.R. 1555, 1995). The bill to supersede the modification of final judgment entered August 24, 1982, in the antitrust action styled United States versus Western Electric, Civil Action No. 82-0192, U.S. District Court for the District of Columbia and for other purposes, by Rep. Henry J. Hyde, also proposes allowing Baby Bells into the long-distance market. Rep Hyde's bill would give the Justice Department an authorizing role above and beyond the purview of the Federal Communication Commission. The Justice Department would have 180 days after a Baby Bell entry application to review and grant entry unless it was clear the Bell company would use its local monopoly to monopolize the long-distance market (H.R. 1528, 1995) . The third bill's intent is also to promote competition and reduce regulation in order to secure lower prices and higher quality service for American telecommunications consumers and encourage the rapid development of new telecommunications technologies, by Sen. Larry Pressler. Sen. Pressler's bill has been approved by the Senate. This bill would allow cable operators, radio and television broadcasters, and local and long-distance telephone companies to enter each other's markets. Sen. Pressler's bill breaks new ground in deregulation, educational programming, rural telemedicine, infrastructure sharing, communications decency, TV rating and universal service, while paving the way for increased competition in the trillion-dollar telecommunications industry (S.652, 1995).

The basic question hindering the passage of these bills into law is the question of service to remote areas. (Carney, 1995). Cornin, et. al. (1995) states that recent research examining sector-specific production functions and the uses of telecommunications in the product process confirms that telecommunications can be a significant substitute for capital. Cornin further states that economic development proceeds more slowly in rural than in urban communities. This is due to fewer economics of scale, less access to health and education facilities and less access to information and technology. The United States has prided itself on a telecommunications system that provides services for all (Networks of the future, hearing before subcommittee on telecommunications and finance of the committee on energy ad commerce, house of representatives, one hundred first congress, first session, 1990).

Past Studies

In 1993, Deloitte & Touche and Data Resources Inc., a subsidiary of McGraw-Hill, submitted a study to the Pennsylvania Public Utilities Commission. This study was funded by a consortium of the major local exchange carrier and interexchange carriers providing telecommunications services within the Commonwealth of Pennsylvania. Deloitte & Touche were to asses the benefits of the deployment of advanced telecommunications technology for Pennsylvania. This assessment would facilitate the formation of strategic public policy objectives.

The result of this analysis states:

> The deployment of telecommunications technology has produced a wide range of benefits to Pennsylvania in terms of its impact on job growth and creation, productivity gains, and production cost savings for industry in the state, gains in household incomes, growth in state and local tax revenue base in the Commonwealth, and the contribution of telecommunications-related efficiency gains to reduce the impact of inflation on the prices of goods and services in Pennsylvania. (Deloitte & Touche, 1993)

Historical data gathered between 1965 and 1995 shows that on the average .7% of all Pennsylvania jobs were generated by telecommunications. Almost three quarters of the increase in jobs occurred in the relatively stable, high-growth non manufacturing sector, more precisely the retail and wholesale industries. (Deloitte & Touche, 1993).

The telecommunications infrastructure study's analysis looked at a baseline scenario and three variation of the baseline. At the current rate of conversion within the infrastructure, the baseline scenario was developed under assumption that broadband services capabilities would be available to all Pennsylvania's residences and businesses by the year 2030.

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The first scenario, called conservative scenario decreased the time for total deployment from the year 2030 to the year 2020. The second scenario, called the moderate scenario, reduced deployment from 2020 to 2014. The third scenario, called the aggressive scenario, accelerated deployment of broadband-capabilities to residences and businesses to the year 2010.

In the baseline scenario, Pennsylvania will gain an average of 59,000 jobs per year starting in 1993 and projected to the year 2030 with a cumulative gain of approximately 2,200,000 telecommunications-induced jobs. In the conservative scenario, an additional 296,000 over the baseline for a total of 2,496,000 jobs. The moderate scenario produced an additional 429,000 jobs over the baseline while the aggressive scenario produced 937,000 additional telecommunications-induced jobs. This increase in jobs in Pennsylvania is assumed to be the result of the reduction in business costs based on his historical data of 1965 to 1991. The reduction in business costs mainly due to input substitutions will allow Pennsylvania's industries to more competitive by passing the savings onto consumers. Again jobs were gained in the retail and wholesale industries. (Deloitte & Touche, 1993).

Methodology

Currently these are 37 universities four-year and community colleges, and post-secondary technical schools in Pennsylvania which offer communications-related programs. For example, looking at the Classification of Instructional Programs (CIP) code for electrical, electronic and communication engineering technology and technicians (CIP code 15030), there are 35 postsecondary vocational-technical education institutions in Pennsylvania that offer this program. Electrical, electronic, and communications engineering technology ad technicians' program prepare individuals to apply basic engineering principles and technical skills in support of electrical, electronics, and communications engineers. This program includes instruction in electrical circuitry, prototype development and testing; system analysis and testing, system maintenance, instrument calibration, and report preparation. According to the Carl D. Perkins Vocational and Applied Technology Education Act, institutions are required to report completers of occupationally specific programs by institutional category. (PA Dept. of Vocational Education, 1995)) During the 1993-1994 school year , there were 1,874 enrollees in this two year program During the same year, there were 353 graduates earning associate degrees.

Supply side. To determine the supply side first a cross walk program will be used to determine the OES codes (Occupation Employment Statistics) which will show those occupations for which graduating students are qualified. Second, the 1994-1995 Carl Perkins survey will be used to determine the number of graduates of those two-year programs. In addition other training sources such as the Communications Workers of America will be identified.

Supply = Employed in a Different Occupations + Entrants and Leavers + Not Working

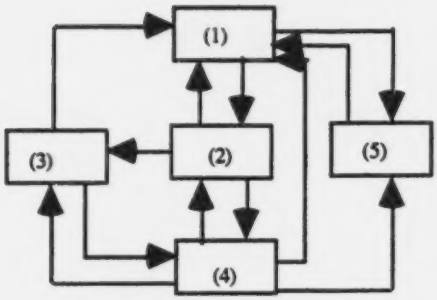
Currently according to the Pennsylvania Department of Labor and Industry's Bureau of Research and Statistics Statistical Information Center's employment outlook (1995) there will approximately 2,045 job openings by the year 2000. One hundred fifty jobs will be due to growth in the industry and 1,895 jobs will be due to separations. Separations is defined as those job openings resulting from individuals leaving the occupation due to death, retirement, or other job opportunities.

Job Openings = Growth + Replacement Needs Due to Separations

Demand side. The demand side will be determined through the use an economic model to forecast change in policies. The proposed model is a computerized replica of the Pennsylvania economy. The Pennsylvania Model is produced by Regional Economics Models Inc. (REMI), a Massachusetts based firm which specializes in regional forecasting and simulations models to be used for policy analysis. The REMI model is available for at a county, state, or combination of regions in the United States (Treyz, G., 1993).

The REMI model is based on an input-output table which shows the interindustry relationship and the delivery of industrial output for personal consumption expenditures, government demand, investment, and exports, Also included a series of behavioral equations estimate output, populations, and labor supply, capital and labor demand, local and export market shares, wage, prices, costs, and profits. (Passmore, 1994)).

Basic Model Linkages



(1) Output
(2) Labor & Capital Demand
(3) Population & Labor Supply
(4) Wages, Prices, and Profits
(5) Market Shares

Source:: Regional Economic Models, Inc.

To determine demand for electrical, electronic, and communications engineering technicians graduates, this study will duplicate the study done by Deloitte and Touche.

Results

This is a work in progress. Questions to be answered include the following: How will the deployment of telecommunications effect the employment opportunities for electric, electronic, and communications engineering technicians? Will the supply of individuals entering these occupations meet the demand? The result of the three scenarios will produce projections of changes on Pennsylvania's electric, electronic, and communications engineering technicians. Survey results from the Pennsylvania's Postsecondary Vocational-Technical Education institutions and other training providers will determine the supply side of the equation.

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Distance Education: An Emerging Concept for HRD Programs

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Many businesses and educational institutions are currently offering or preparing to offer distance education programs. This paper examines various distance education methods, the current context—business and/or education—in which they are used, and the providers.

Human Resource Development (HRD) professionals in today's education and business organizations face three challenging tasks: managing information-age outputs, paying more attention to customers, and spending less money doing it. For HRD academicians, accomplishing these tasks involves helping learners acquire more information in ways that require fewer resources from the learners, faculty, and institution. For HRD practitioners, accomplishing these tasks involves improving performance and learning in workplace settings that have ever-changing customer needs and technologies—and generally, diminishing budgets. To overcome the challenges, academicians are turning to distance education. Likewise, corporate and business training programs are also using distance education to make their programs more accessible and cost effective and to increase the timeliness of delivering new information (Portway & Lane, 1992).

Distance education can be defined as two-way communication between instructors and learners separated by geographical distance who use technology for the purpose of facilitating and supporting the educational process (Dooley & Greule, 1994). In more recent years, the concept of distance education has become associated with emerging technologies. Jones and Simonson (1993) defined distance education as a catch-all phrase for any form of instruction in which the learner and instructor were separated geographically and linked by telecommunication systems that permitted live, interactive audio and/or video exchanges. Given the broad definitions of distance education and the emerging technologies, HRD professionals have many delivery methods available from which to select.

Distance Education Delivery Methods

For this paper, distance education is defined to include both non-interactive and interactive methods. Typical delivery methods include correspondence courses, audio and videotapes, radio and television programs, satellite broadcasts, audio conferencing, two-way interactive videoconferencing, and computer conferencing (Cyrs & Smith, n.d.). Each method has strengths and weaknesses relative to instructional purposes and context, resources available for providing the learning, and needs of the audience. The following paragraphs overview five commonly used non-interactive distance education methods.

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Correspondence courses have been available for many years and are still widely used. Typically, this distance education method provides learners with all the course materials in printed form. Most correspondence courses are self-paced, allowing learners the freedom to move at their own rates through the courses. Often in academic settings, staff members from the correspondence office administer courses and answer learners' questions about procedure, limiting the instructor's role to one of answering content questions and grading completed work. Consequently, the learner is isolated from the instructor and other learners preventing any interaction (Van Kekerix & Andrews, 1991).

Audiocassettes are also used for distance education. Western Interstate Commission on Higher Education surveyed 344 public and private educational institutions and learned that 29% of the institutions used audiocassettes for off-campus instruction and 66% for on-campus instruction (Wilson, 1991). Wilson cited two advantages of this distance education method, lower costs and ease of use. In addition, he cited two disadvantages, the lack of visual presentation and limited student/teacher interaction.

Distance education has also been delivered via radio. For example, the University of Wisconsin developed the "University of the Air" program which allowed students to listen to college courses broadcast over the university's radio station. In contrast to this example, distance education via the radio tends to be more frequently used in developing countries (Wilson, 1991).

Cable television (CATV) systems offer another delivery method. Telecourse participants use televisions located in their homes or businesses to access classes or workshops. Participation in telecourses requires that the instructors and learners have access to CATV systems.

Another delivery method, microwave broadcasting can reach non-wired viewing sites. Sometimes called wireless-cable, this method is often used to broadcast pre-recorded instruction to viewers within a twenty mile radius. Microwave broadcasting is often a viable alternative for schools because it is cost-effective and easy to install. This method is actively used by higher education institutions, public broadcasting stations, and commercial operators (Douglas, 1993). Since both CATV and microwave broadcasts are usually pre-recorded, another advantage is that lessons can be re-broadcast several times for the convenience of learners. One disadvantage is that neither method allows for direct interaction with the instructor.

The limited interaction between learners and instructors is common among correspondence courses, audiocassettes, radio programs, CATV, and microwave broadcasting. However, recent technological advances have resulted in other delivery methods that overcome this limitation. The following paragraphs overview four interactive distance education methods.

The first method is satellite broadcasting which involves transmitting a television signal from a point of origin, through an encoder (uplink) to a satellite, then a satellite transponder strengthens the signal and transmits it to a decoder (downlink). Accompanying the video signal are two-way audio signals that are carried across telephone lines in a manner similar to audio or teleconferencing. The satellite networks being used today aid employers in sharing programs and information with each other and allow universities to send programs easily and directly to employer sites (Portway & Lane, 1992).

The second method, compressed video, is fast growing. It uses a digital television signal that takes up less space than the traditional analog signal, allowing for faster transmission of information. Wilson (1991) felt that compressed video would replace the current telecommunication systems as technology continued to develop and the price became more affordable. Satellite and compressed video methods have similar advantages. Both allow immediate interaction and feedback between instructors and students, as well as interaction between students at multiple locations. Another advantage is that both methods closely simulate a live classroom setting. Disadvantages of the methods include the high start-up and operating costs. Also with rapidly changing technology, systems may become quickly obsolete.

The third method is interactive video which synthesizes computer and video technology. This distance education method is capable of linking learners from various locations with an instructor via video cameras, desk mounted microphones, and television monitors (Schiller, 1993). Video material can be viewed in a traditional way or can be retrieved and mixed with

computer-generated text. Advantages include ease of use and the availability of two-way communication allowing for interaction and feedback. However, interactive video systems are expensive, complex, and time-consuming to design and construct (Jones & Simonson, 1993).

The Internet, the most expansive computer network in the world, is accessible from almost any computer (Schiller, 1993). Advantages include the capability to communicate worldwide using only a computer, modem, and telephone line. The Internet has resulted in new ways of accessing and disseminating information. For example, Penn State University is currently originating for-credit courses via the Internet (G. McLean, personal communication, December 14, 1995). Also, Henley Management College uses its computer communication system to allow their students to access data, exchange information, and take part in electronic conferencing (Henley Management College, 1995). A disadvantage of this delivery method is the lack of visual interaction between instructors and learners.

After reviewing the non-interactive and interactive methods, HRD professionals should realize that regardless of the methods used, the goal is to provide learners with the cost effective instruction that would otherwise be inaccessible (Meyer & Crawford, 1994). Since each method has different capabilities and limitations, matching the technology to the education and training needs may require mixed delivery methods (Portway & Lane, 1992). In mixing distance education methods, HRD professionals should be aware that educational institutions have been the primary context for non-interactive delivery methods while both businesses and educational institutions have been the context for interactive methods.

Distance Education Providers and Consortiums

In implementing HRD programs, HRD academicians and practitioners have multiple providers of distance education available which can be accessed as a resource. Colleges and universities have been on the forefront of providing distance education, both in credit and non-credit course offerings. Increasingly, business organizations are finding distance education programs to be a feasible instructional and information delivery method.

Some of the providers reported in the literature include:

1. AT&T has established an organization called the Center for Excellence in Distance Learning (CEDL) to investigate, develop, and demonstrate innovative applications of state-of-the-art telecommunication technologies. CEDL faculty work closely with university faculty, AT&T Bell Laboratories, and nationally recognized experts to research problems in distance education and to develop creative solutions. CEDL is the AT&T teleconferencing and distance education showcase for managing information in corporate training environments and traditional educational settings (Chute, Thompson, & Starin, 1994).

2. IBM and NEC jointly developed an Interactive Satellite Education Network (ISEN) in the 1980s. Some of the innovations introduced in this corporate training network, including compressed video and response terminals, are only now being widely applied in education (Portway & Lane, 1992).

3. Public Broadcasting System Adult Learning Service (ALS) established the Adult Learning Satellite Service to provide colleges, universities, businesses, hospitals, and other organizations with a broad range of educational programming. ALS helps colleges, universities, and businesses increase learning opportunities for distance learners; enrich classroom instruction; update faculty; train administrators, management, and staff; and provide educational services for local communities (Portway & Lane, 1992).

4. National Technology University (NTU), the leading provider worldwide of satellite delivered advanced technical education, is a cooperative effort of twenty-nine major engineering colleges. NTU offers courses to more that 230 sites, including corporations, government agencies, and colleges (National Technology University, 1995).

5. Mind Extension University (ME/U) uses cable television networks dedicated to distance education in bringing courses into the home (Green and Gilbert, 1995).

6. Educational Television Services (ETS) was established by Oklahoma State University's Telecommunication Center to encourage the use of distance education. ETS is equipped with a self-contained, instructor-controlled, classroom-style studio for videotaping courses and live two-way presentations via compressed video (Educational Television, 1995).

Table 1 shows some of the providers of distance education which can be utilized as a resource in implementing HRD programs as referred to in the literature.

Table 1. Methods, Context, and Providers of Distance Education as Reported in the Research

Methods	Context	Providers	References
Correspondence Courses	Education	Universities	Van Kekerix & Andrews, 1991
Audiocassettes	Education	Universities	Wilson, 1991
Radio Programs	Education	University of Wisconsin, Developing Countries	Wilson, 1991
CATV	Education	Penn State University, Mind Extension University	Green & Gilbert, 1995
Microwave Broadcasting	Education/Business	Universities, Public Broadcasting Stations, Commercial Operators	Douglas, 1993
Satellite Broadcasting	Education/Business	Public Broadcasting System Adult Learning Service National Technology University,	Portway & Lane, 1992, National Technology University, 1995,
Compressed Video	Education/Business	IBM and NEC, OSU's Educational Television Services	Jones & Simonson, 1993, Wilson, 1991, Portway & Lane, 1992, Educational Services, 1995
Interactive Video	Education/Business	AT&T's Center for Excellence in Distance Learning	Schiller, 1993, Jones & Simonson, 1993, Chute, Thompson, & Starin, 1994
Internet	Education/Business	Penn State University, Henley Management College	Schiller, 1993, McLean, 1995, Henley Management College, 1995

Consortiums have come into existence to provide high quality and economical distance education programs to learners. Affiliations have been formed among educational institutions, government agencies, corporations, and technological communities (International Network for Education and Technology, 1995). Most consortiums have the purpose of collaborating in the development and implementation of distance education.

There are several major consortiums currently in existence. These include:

1. A*DEC Distance Learning Consortium (A*DEC) is a national consortium of state universities and land grant institutions providing high quality and economical distance education programs and services via the latest and most appropriate information technologies (A*DEC Distance Learning Consortium, 1995).

2. International Network for Education and Technology (INET) is an independent, non-profit, Utah-based corporation that was established to act as a bridge or catalyst for productive cooperation between international businesses, educational, government, corporation and technological communities. INET seeks to demonstrate the effectiveness of collaborative efforts in the development of interactive educational training systems (International Network for Education & Technology, 1995).

3. Globewide Network Academy (GNA) is a global non-profit consortium of educational and research organizations. The goal of GNA is to improve education by creating a central marketplace for courses and offering administrative and technical services in support of on-line programs (Globewide Network Academy, 1995).

4. Ideanet is a consortium consisting of the Missouri School Boards Association, Northern Arizona University, Oklahoma State University, and Educational Service District 101, which operates Satellite Telecommunication Educational Programming. Ideanet provides five channels of educational programs, four for students at various levels, and one dedicated to professional development for educators (Shields, 1995).

Summary

As stated earlier, in today's education and business organizations, HRD academicians and practitioners face the integrated tasks of managing information-age outputs, paying more attention to customers, and spending less money doing it. By determining which distance education methods are available, who is using them, and how they are working in practice, HRD professionals can position themselves as informed consumers of these delivery methods. Further, knowledge of available consortiums can aid HRD professionals in creating distance education opportunities that will allow them to maintain or even increase the viability of HRD programs.

Because the field of distance education is still relatively new, few questions have been asked about effectiveness and even fewer have been answered. Systematic research is needed to understand how distance education will effect the field of human resource development and tomorrow's education and business organizations.

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Issues in Using Managers as Instructors: The Qualitative Perspective

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Organizations that aspire to become learning organizations must encourage managers to adopt new roles as coaches, trainers and educators if learning is to become distributed and continuous at multiple levels within the organization. This paper examines the issues that confront managers who adopt the role of instructor.

The purpose of this qualitative research study was to support current collaborative research activities being conducted by The Ford Design Institute (FDI) and The University of Georgia's (UGA's) Department of Adult Education to assess the effectiveness of the "Manager-as-Instructor" approach to training within Ford Motor Company (Watkins, Valentine, Ellinger, Cseh, Bellinger, Barnas, Blum, 1996).

The Ford Design Institute implemented a top-down cascaded training approach in which technical managers serve as instructors for their respective subordinates. This process of using managers in a training capacity is referred to as the Manager-As-Instructor approach. This approach includes managers at senior technical management levels to technical non-management levels. The FDI and UGA project teams believe that there is much to learn and document relative to this type of delivery process within a business/industry environment. The overarching goals of this large scale research project include assessing the effectiveness and boundaries of this educational process. The smaller scale qualitative research project was designed to provide insight into the manager-as-instructor approach from the perspective of participating managers and trainees. It was anticipated that findings from this smaller scale study would aid in the survey development process for the manager questionnaire. Information obtained from telephone interviews during the course of this project resulted in the modification of the trainee questionnaire. This paper documents what has been found in previous research about managers as instructors, and reports the findings from the qualitative study.

There were four specific questions that guided this study:

1. What would improve this approach for both managers and trainees?;
2. Identify specific examples when it was appropriate that managers serve as instructors;
3. Identify specific examples when it was not appropriate that managers serve as instructors;
4. Identify any changes that have occurred as a result of the manager-as-instructor approach.

Previous Research on Using Managers as Instructors

The subject of managers as trainers, instructors, and educators is one that can incorporate many potential literature bases: organizational learning theory, management and leadership, training and human resource development, transfer of training, the learning organization, and innovation literature. For the purposes of this study, the relevant literature selected for inclusion reflects the literature associated with managerial roles and emerging roles within the learning organization.

Educational Dimensions of Managerial Roles. Evered and Selman (1989) acknowledge that "the 'manager' is viewed variously as a team captain, parent, steward, battle commander, fountain of wisdom, poker player, group spokesperson, gatekeeper, minister, drill instructor, facilitator, initiator, mediator, navigator, candy store-keeper, linchpin, umbrella-holder,

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and everything else between nurse and Attila-the-Hun" (p. 16). What managers and leaders do, how they respond, think and behave has been a central part of the literature on management, leadership and organizational behavior for several decades (Yukl, 1989). McLennan (1967) conducted a study of 520 managers in which he analyzed some of the skill components of managerial jobs. Respondents were presented with a checklist of 65 job related items that they rated on a Likert scale. The individual manager rankings were used to create an overall ranking with an indication of the degree to which the items were deemed necessary to the average managerial job. "Training subordinates" was ranked 12 out of 65 items and was considered extremely necessary in terms of the degree of its perceived importance.

Mintzberg (1990) describes the manager's job in terms of ten "roles," or "organized sets of behaviors identified with a position" (p. 168). He contends that formal authority and status give rise to three interpersonal roles (figurehead, leader, liaison), which give rise to three informational roles (monitor, disseminator, spokesperson). These two sets of roles enable the manager to play four decisional roles (entrepreneur, disturbance handler, resource allocator, negotiator). The leader role is largely reflective of the responsibility that managers have for the work of the people in their unit. He contends that the manager's actions in this regard constitute this role. Mintzberg asserts that "some of these actions involve leadership directly - for example, in most organizations the *managers are normally responsible for hiring and training their own staff*" (p. 168, italics ours). Drawing on Mintzberg, Watkins (1981) found that these roles also characterize management of an innovation. The leader, figurehead, entrepreneur and disturbance handler roles are more prominent. Additionally, the educative value of personal identification with the innovation ("I am the project") offers another window into why organizations might use managers as instructors when the outcome is organizational change. In a more recent article, Mintzberg (1994) attempts to integrate what we already know managers do around a framework of concentric circles. At the core are the person in the job, the frame of the job, and its agenda. These are surrounded by roles managers perform at three levels: managing by information, managing through people, and managing action, each carried out inside and outside the unit (p. 11). Managing through people, Mintzberg contends is a multi-level process. Managers lead on the individual level, "one-on-one." Managers "encourage and drive the people of their units -- motivate them, inspire them, coach them, nurture them, push them, mentor them, and so on" (p. 19). Managers lead on the group level by building and managing teams, and ultimately they lead on the unit level, especially with regard to the creation and maintenance of culture. Managers as leaders often adopt some of the roles of trainer, mentor, and coach.

Yukl (1981) and his colleagues completed a four-year program of research in which they identified fourteen behavior categories of managers. In their follow-up research, five additional categories were added to their taxonomy for a total of nineteen behavior categories. The following categories of leadership behavior emphasize the educational roles of managers:

> *Praise-Recognition:* The extent to which a leader provides praise and recognition to subordinates with effective performance, shows appreciation for their special efforts and contributions, and makes sure they generally get credit for their helpful ideas and suggestions.
>
> *Information Dissemination:* The extent to which a leader keeps subordinates informed about developments that affect their work, including events in other work units or outside the organization, decisions made by higher management, and progress in meetings with superiors or outsiders.
>
> *Performance Emphasis:* The extent to which a leader emphasizes the importance of subordinate performance, tries to improve productivity and efficiency, tries to keep subordinates working up to their capacity, and checks on their performance.
>
> *Training-Coaching:* The extent to which a leader determines training needs for subordinates, and provides any necessary training and coaching.

More recently, Yukl (Yukl and Van Fleet, n.d., p. 156) proposed an integrating taxonomy with fourteen generic categories of behavior applicable to any leader or manager. This recent taxonomy of managerial practices redefines training-coaching behavior to developing and mentoring which equates to "providing coaching and career counseling and doing things to facilitate a subordinate's skill acquisition and career advancement" (p. 156). According to Kanter (1994), " a great way to develop future leaders is to rotate them through training roles and keep them active in teaching others, even while they pursue their other business responsibilities" (S42).

Emerging Roles of Managers in the Learning Organization. Senge's (1990) conception of the learning organization is one in which the leader assumes new roles and responsibilities. Senge characterizes the leader's new work as being a designer, teacher and steward. Senge suggests that leader as teacher "does *not* mean leader as authoritarian expert whose job it is to teach people the 'correct' view of reality" (p. 11). The leader as teacher is about helping everyone in the organization, including the leader, to gain more insightful views of current reality. This, Senge, says "is in line with a popular emerging view of leaders as coaches, guides, or facilitators" (p. 11). In short, Senge suggests that leaders in learning organizations are responsible for "*building organizations* where people are continually expanding their capabilities to shape their future -- that is leaders are responsible for learning" (p. 9). According to Senge, (1990) the learning capabilities that matter are inseparable from the work that people do. Managers are typically more knowledgeable about organizational matters than trainers, so consequently, trainers often lack the credibility to assist in addressing complex issues that require substantive knowledge. Trainers typically do not have accountability for managing such processes so they normally lack the capability to help employees make needed changes. For these reasons, "managers," Senge asserts, "are the only people who can be truly effective in making learning happen" (p. S46). Given the magnitude of changes required to develop and promote organization-wide learning capabilities and continuous innovation, Senge (1994) questions why it would be assumed that training and development professionals would be solely charged with making organizational learning happen. Senge (1994) does not imply that the role of training and development personnel is eliminated in the learning organization. He suggests that trainers and developers have two important roles. The first involves helping managers to design learning processes because of their expertise in design and facilitation, and the second involves guiding the diffusion of new learnings. In the context of the learning organization, managers as trainers helps to achieve sustained organization-wide learning.

Several cases of exemplary global learning organizations which support Senge's contentions about managers roles in the learning organization are provided by Marquardt (1994). At Motorola, for example, executives act as instructors. Motorola's COO, William Weisz contends that managers must be visibly involved, as participants or instructors, because their involvement reflects what is truly perceived to be important by employees. At PPG, not only trainers, but also managers are responsible for learning and also do the training delivery. At Xerox, training in problem solving and quality improvement is delivered in "family groups" which consist of a manager and his/her subordinates. The manager is assisted by a professional trainer in the design and delivery of the training. During the training process, the group selects a project for the application of the quality process and tools. Following training, the manager guides the family group in the use of the quality process. The members of the family group, subsequently work with a professional trainer to provide training to their own subordinates. This method of training is referred to a training cascade.

Greenwood, Wasson and Giles (1993) suggest that middle managers play an important role as facilitators within the learning organization. Middle managers coach, counsel and empower their staff. Additionally, they design and deliver training. Greenwood et al. (1993)acknowledge that the spectrum of training is broadened in a learning organization to include multi-delivery modes and self-directed and managed learning. The cases illustrate that, in the rapidly changing global environment where organization-wide learning is an imperative, both managers and trainers have an important role in facilitating continuous learning and its use within the organization.

Methodology

The primary method of data collection was telephone interviewing. In July, 1995, we were provided with a randomly drawn sample of five managers and five participants from a member of the FDI research team. These five managers had been identified as having served in the capacity of instructors and the five participants had been identified as having taken a course using the manager-as-instructor approach. An eleventh manager was added to our sample, however, this manager was not randomly selected.

Although the remote location of Ford Motor Company in Dearborn, Michigan prevented us from conducting personal interviews, the telephone interviews, coupled with analysis of documents provided by FDI, have been our primary tools for investigation. We developed the

interview templates that were used for both managers and participants. Semi-structured interviews (Glesne & Peshkin, 1992) using the interview templates were conducted with this sample. The duration of the ten telephone interviews conducted ranged from 15 minutes to 30 minutes, with 4 of the 10 respondents completing the interview in 15 minutes and the remaining 6 completing the interview in 30 minutes. The telephone interviews were tape recorded with the permission of each respondent and transcribed verbatim. In addition to the transcriptions, field notes were taken during the course of each interview. To protect the confidentiality of each respondent, no references to gender or name were made. The respondent's were identified only by number. The numbering sequence of the respondents occurred in a random fashion.

The interview process began on July 11, 1995 and was concluded on August 10, 1995. Andrea interviewed ten of the eleven respondents identified by the random interview selection. As part of the interview process, both managers and trainees were contacted and a telephone interview appointment was made. A fax confirmation of the scheduled interview appointment was sent to each manager/trainee along with the appropriate interview template. This fax confirmation also identified the purpose of the study, requested their permission to tape record the interview and assured confidentiality. Following the interview, a thank-you note was faxed to each manager/trainee which again outlined the purpose of the study as well as reconfirmed our commitment of confidentiality.

For the purpose of this study, it is important to acknowledge the potential limitations of the telephone interviewing method that was used. Some of the limitations included the inability to personally establish rapport with respondents, the inability to observe facial expressions and body language, and to observe voice inflections and changes in tonality with body language.

Initially, data analysis involved using open coding (Strauss, 1987). Each transcript was read and initial impressions were recorded. Subsequently, specific portions of the transcripts were highlighted as similarities were found in the data. A cross-case analysis (Patton, 1990) was considered because the data had been structured in a question format that could be compared across managers, across trainees or across combined responses; however, we chose not to use this type of analysis. We concluded that analyzing the data in the question format might not allow the data to speak freely and our findings might be constrained by our initial questions. After initial reading and preliminary coding, we reviewed the transcripts again to determine if our initial coding scheme captured the "recurring regularities" (Patton, 1990) that we saw emerging in the data. Axial coding is an aspect of open coding and consists of "intense analysis done around one category at a time in terms of the paradigm items" (p. 32). After several readings, our open coding resulted in the creation of seven themes. Selective coding (Strauss, 1987) occurred after open coding in which additional codes as they related to core codes (themes) were examined.

Findings

Seven themes emerged from the qualitative data set. These themes are: the configuration of the innovation (the Manager-As-Instructor approach); roles and responsibilities of managers or role fit; time; concerns about adequacy to teach, manager-participant relationships, outcomes, and ideas and alternatives. Each theme is subsequently discussed.

Hall and Hord (1984) offer a model, the Concerns-Based Adoption Model (CBAM) which is an empirically based framework that outlines the developmental processes that individuals experience as a new innovation is implemented. Two diagnostic dimensions, concerns and behaviors, are associated with the way individuals change as they become familiar with the innovation. Hall and Hord (1984) identify seven stages of concern and eight distinct levels of use that are associated with the individuals comfort level in the adoption of the innovation and their skillfulness in using the innovation. A third diagnostic dimension, innovation configurations, defines the nature of the innovation being implemented. Innovation configurations refer to the various forms of an innovation that result when the individual users of the innovation adapt it for use in their particular situations. Based upon this model, the first theme that emerged within the data set was the variation of how the innovation, the use of managers as instructors, was adapted in practice by the managers. This was characterized as the theme of the ***configuration of the innovation*** (Hall and Loucks, 1978). According to the data, some managers delegated the instructional activities to others, and some managers adapted the course materials to their audiences

to more closely align the course to the environment in which the materials would be used. The following excerpts from the transcripts illustrate this theme.

"...In fact, there are some managers who delegated the thing and simply stood pat and said that my priorities are such that I will not do this. I've got products to build and product to design and there are just other things far more pressing than this kind of thing...we'll have to get it done some other way and no thank you...and although those instances have been rare, they're there certainly" [M2].

"Now the thing that has helped is the extra freedom that we provided a little later on when we were rolling out the first course of tailoring the course to your own environment. There is a lot of material there and you can take as much as two days, generally a day and one half to go through it all. But if you tailor them to your environment, including only the things that you think your particular audience is interested in but doesn't know about...that helps an awful lot" [M2].

These findings suggest that the delivery process associated with the implementation of this approach may be inconsistent with the original intentions of the developers of this cascaded approach. Variations in implementation have been associated with variations in outcomes. From this theme, we might predict that the innovation configuration will vary from ideal, to acceptable, to unacceptable variations. If this is true, then it would be important to be able to differentiate between responses of users who actually experienced the innovation as intended from those who did not. Further, Hall and Hord (1984) note that "If the innovation is perceived as inappropriate, it is likely to be used with less commitment" (p. 345). Measures which determine whether or not users support the underlying rationale for the innovation would help differentiate between those who implemented the innovation incorrectly due to lack of understanding as compared to those who did so due to disagreement for the underlying premises. Emrick and Peterson (1978) found that individuals who were not positively disposed toward the innovation also had lower learner achievement.

The next theme were the ***roles and responsibilities***, or more precisely, managers' sense of **role fit** with serving as an instructor. Of the five managers, two indicated that they viewed serving as an instructor as an additional assignment to their current job responsibilities. Two others suggested that instructing was an integral part of his/her job as a manager. One manager indicated that FDI should conduct the training. The following excerpts illustrate this theme:

"Well, I think the most important thing that would help me or help the other people that are trying to do this is to have management recognize it as an integral part of their job and have the individual also recognize that it is integral to their job" [M8].

"I feel very strongly that one of management's responsibilities is to be a teacher...that teacher can either be formal, informal or casual. I think the quicker that we all tumble to the fact that we're here to teach people and to counsel people and to instruct people, the quicker we'll be in the mode we need to be in..." [M8].

"...So teaching introductory-type courses like this first one is probably OK but I'm not in favor of teaching higher level courses..." [M9].

"....I want to say I did an OK job, but to do a better job, I should have spent more time preparing. But with our current positions, this is just an added assignment" [M7].

Consistent with this theme of the apparent disparity about managerial roles were the different assumptions about the business Ford was in -- *"we need to stick to our business and our business is making cars"* contrasted with *"the business we're in is people, not mechanics...and we need to take more responsibility for the people in the business and instruction and teaching is a very big piece of that"* [M4]. Leadership research has long contrasted a production vs a people orientation among managers, but this research suggests that this contrast may be a highly significant explanation for differences in how managers responded to the role of instructor.

The notion of *time* was a central theme within the data set. Time included not having enough time to prepare for instruction and not having enough time for this added assignment. This participant suggested that *"...I think that in the current state of my company, free time...the time available for a manager to be properly trained is simply not there...I don't think that it is a bad idea conceptually, I think it's just the practical implementation of it requires too much time for the trainer to be trained that is simply not available"* [P9]. Time was also described as a smokescreen, or an excuse that there is never enough time to do the job at Ford. One respondent characterized time in terms of priorities: *"I think that it is a matter of priorities...in other words, if*

you feel it's really important to teach and coach and relate to your people in a more effective way, then you are going to make that a priority and you're going to find time to do it and maybe you might not have time to do something else...but I think it comes back to what are priorities really should be..." [M5].

The contrast noted here is consistent with Stage of Concern (Hall and Hord, 1984) research which suggests that individuals who have not yet adopted an innovation (the Self Stage of Concern) are more likely to talk in terms of future time--imagining what the time costs will be and comparing this to other demands on their time. Individuals at early use (the Task Stage of Concern) are more likely to be concerned about the time it takes to actually use the innovation, i.e. time to prepare, time to learn more about using it, time going from awkward, canned use to more skillful use, etc. This contrast between self and task concerns is evident here and is a fruitful area for further exploration.

Several comments made by managers and participants revealed the related theme of ***concerns about adequacy to teach.***. Concerns articulated included the lack of appropriate pre-training support and the requisite skill sets of managers to provide the instruction. As one instructor put it: "*....because most of us are line managers, we're not professional instructors it would be nice to have some sort of at least brief training on the do's and don'ts and how to gauge your audience and how to physically do it...*" [M8]. One manager suggested that fear of instructing or fear of not doing well in an instructional capacity may have been the underlying concern that was depicted as a factor of time. Some managers wanted to know what their peers thought about this approach.

Participants noted a lack of post-training follow-up: "*....it was a good class.....I guess it's just unfortunate that there was not follow-up on it...there was no further discussions and subsequent discussions and subsequent projects as to how we can try and involve robustness.....it was a disappointment that it was talked about and then is was basically dropped kinda treated as a requirement you have to teach this class, and then it was taught, and that was the last thing that was done with it....so our work really was not directly influenced by it at all...it was just something we needed to do to be in tune with the way the company is changing in the other engineering organizations...so we weren't directly impacted or affected.*" [P10]. This participant did not see a connection between the way the company is changing and the way he/she would need to change. Taking personal initiative to follow-up does not seem to have occurred to at least this participant. Another area to explore was managers' knowledge of their role beyond the classroom and participants' definition of their responsibilities for learning and using the concepts.

Manager-participant relationships emerged as a theme. Many managers alluded to having good, open working relationships with their subordinates. From that standpoint, despite inconsistencies about whether instructing was an appropriate role, outcomes were generally perceived to be positive. Rapport, credibility and respect were mentioned by some managers. For example: "*...well as an instructor of my own folks...I started out with rapport...they know me and I know them...and by having that already established we could deal very frankly with issues of whether we should cover this material in depth or whether we should move on and proceed a little faster...Now questions came up about the material or about where things are headed that I could answer frankly knowing their backgrounds, their levels of interest and their understanding...a hired hand...an actor familiar with this material teaching from rote couldn't bring that to the party at all...*" [M2]. When some managers indicated that time was a premium and their preparation somewhat compromised, the relationships with their subordinates intervened to make the training experience productive. Those managers who viewed instructing as an integral role reported the strength of their relationships as a factor in their success. Some trainees suggested that poor relationships negatively impacted the training experience and outcomes. One trainee said "*....so I have noticed nothing that has happened as a result of him teaching the class, noticed really nothing in any other ways since his management style is basically hands-off. He really doesn't interface very much with the people in the office so I haven't noticed anything as a result of him teaching the class.*" [P10]. When this trainee was asked if he/she would feel differently about the manager providing instruction if his/her manager had a better working relationship with his/her subordinates, this was the response: "*Absolutely,...it then becomes more of a team effort because every team has a coach and if you think about sports...all the great teams have great coaches and the coaches always get along with their players...but when you have a team that has a coach and the team hardly ever interfaces with the coach then chances are you're not going to have a very successful team...and when the coach tries to tell the players things and the players perhaps don't*

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have a great deal of respect or don't have a good relationship with the coach, it's not as effective" [P10]. Another manager commented, *"I gained a greater awareness of their perspectives and they mine so as a result I think we had a better communication and team work..."* [M5]. One manager shared this comment as a result of providing instruction: *"...you have much better credibility with the folks when they know you are a part of them rather than some figure sitting in the corner. It's gotten me much closer to my people"* [M8].

Respondents also described a number of outcomes of this change, particularly with respect to use of the material in their work. Managers identified outcomes associated with team building, use of the subject matter in practice, increased personal knowledge and stronger relationships, and trainees thought that the manager as instructor approach benefited to the classroom environment. Both managers and trainees alike were not able to use the subject material, or suggested that the concepts associated with robustness were "need to know," but not "need to do." Comments from both managers and trainees relative to perceived outcomes included:

"So I used it (robustness) right away and that was really neat and haven't used it since..." [P3].

"I think it's critical that if you are teaching in your own area you can personalize the data.....if you have a paid professionals up there or a consultant up there often they talk about the same things but they talk about them in non-relevant terms or abstract terms....so I think it's very important that we as the line management are involved because we can go and give examples..give experiences...give personal anecdotes that touch and feel the organization rather than some just mechanical example that really is intellectually important but is probably not socially relevant." [M8].

"..during the training material, people would ask well where are we gonna use that in our job...in our department and we could elaborate on upcoming designs ...and I see that happening off and on in our design process now...." [M7].

"...but I think that the awareness that we're after robust design and thinking of all the different factors that your product could be driven in . . . is in the back of my engineers' heads more now because of that initiative... " [M7].

"I would think that just the fact that we all together took the course at the same time and had part of the interface and discussions even during the course were about specific problems, we were all working on as a team so I think that it came through further on in the program" [M4].

Overall, nine of ten respondents indicated that the outcomes of using managers as instructors were positive. Responsibility for continuing use and reinforcement of use was somewhat inconsistent between managers and trainees. This is a significant area to explore.

The final theme that emerged, ***ideas and alternatives***, represents the comments and suggestions that were provided by both managers and participants when asked to consider changes to this approach. Some ideas and alternatives included providing training to managers on how to be more effective trainers, and providing a model of what the training should have looked like prior to being cascaded within the organization. Other suggestions included co-teaching, or the use of more relevant and specific materials applicable to diverse situations. Finally, one manager noted that more involvement by managers in designing the program could make it more effective:

"...a critical thing....you know it's a heck of a time to bring this up...the train is already underway here, the ship has left the port...but a critical thing we didn't do that is so important in developing any kind of product...whether it is an offering of materials through coursework or the sale of a vehicle is to get the customer involved... what I feel is that we made a drastic mistake in not getting them involved in the early stages during course development....we're reaching out and trying to present a message here in North America to about 14,000 engineers and we didn't [ask] any of them... what do you think of this stuff.....I guess that 's the strongest thing I feel about this whole business..." [M2].

Conclusions

In summary, these seven themes provide useful insights about this approach from the perspectives of those who served in an instructional capacity and those who experienced the cascaded training delivery. Overall, what have we learned about the innovation of using managers as instructors? From this preliminary snapshot, we were able to determine that the reception to the approach was consistent with what we would expect to find in the early stages of an innovation implementation

process and that there are differences in perception and support for the innovation. What remains to be seen is whether or not the differences between managers who must use the innovation and participants who receive the innovation will either greatly alter the innovation or kill it. Captured in these themes is the fact that the manager is much more affected by this change since he or she must take on a new and challenging role, one which has the potential to alter their relationship with their subordinates. As the individuals with the most power in the organization, their voice is likely to be stronger. Areas explored in further research included determining the interrelationship between support for the innovation, role fit, and concerns about the innovation among managers; and the interrelationships between extent of use of the knowledge taught by the manager and the configuration of the innovation among participants (Watkins, K., Valentine, T., Ellinger, A., Cseh, M., Bellinger, L., Barnas, C. and Blum, D., 1996).

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Training Delivery Problems and Solutions

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The authors surveyed 371 trainers who were asked to recall training delivery problems or difficulties they experienced as novices. The analysis of their 1,098 responses conclude that novice trainers faced 12 common training delivery problems. Twenty expert trainers were subsequently surveyed and asked to present successful strategies for dealing with the 12 training delivery problems. The analysis of their responses concludes with a synthesis of the common training delivery problems experienced by novices and the experts' advice on how to solve these problems.

The training of employees at all levels has taken on a significant role in industry and business. Rapid technological advances in the workplace and the corporation's concern for profit in today's marketplace drive the emphasis on training employees. When properly used, training increases both the effectiveness and efficiency of employees (Swanson, 1992). Within this framework and with all the advances in instructional technology, instructor-led training still remains the most popular method of delivering training, year after year, according to Lakewood Research's annual census.

Most beginning trainers are not graduates of programs specifically designed to train trainers. They are generally subject matter experts in their organizations and have good communication skills. Their preparation to deliver training often follows a "see and do" model. That is, they observe the course in preparation to deliver it and then they teach the course to other employees in a similar manner to what they observed.

Criticism of the training profession has included the lack of research about the processes used to select instructors, the evaluation methods used to rate the instruction, and the evaluation methods used to rate the instructor (Swanson, 1982). As training in industry and business continues to increase, the body of knowledge possessed by expert professional trainers will need to be captured and shared with more employees in organizations (Jacobs, 1992).

Purpose of the Study

Little has been written about the ways in which expert trainers handle specific training delivery problems in the training classroom. Proven and practical techniques for dealing with specific training delivery problems would help novice trainers.

There were three purposes for this research: (a) to determine the difficulties novice trainers experience during the delivery of training, (b) to gather reports from experts on how they handle such situations, and (c) to synthesize this information into a useful aid that defines the training delivery problems and provides specific solutions.

Overview of the Literature

Training and development has grown dramatically during the past three decades. It has become a 30 billion dollar profession. Each year, 15 million employees participate in 17.6 million courses. One out of every eight American workers attends a formal training course every year (Chakiris & Rolander, 1986). Furthermore, more employees each year are finding themselves in the role of trainer without having adequate preparation.

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The burden for understanding and mediating the organization's desire for expertise and the learner needs is ultimately left on the trainer's shoulders (Yelon, 1992). The research on training adults in the workplace typically focuses the needs of the organization (Sleezer, 1992) and the learner (Knowles, 1984). Much less is known and said about the specific problems facing the novice trainer and their role in delivering instruction. Instructor skills are the skills needed by a trainer when using structured learning events, such as group discussions, presentations, role plays, and case studies. These skills also include assessing learners' needs, using media and materials, administering exams or instruments, and providing feedback to participants (McLagan, 1983).

General models of training and learning are important to the profession as are the problems that threaten and discourage practitioners. At the general level, Knowles (1984) suggested that four concepts can be used to think about adult education: (a) the self-concept of the learner, (b) the learner's experience, (c) the learner's readiness to learn, and (d) the learner's perspective of time. Smith's (1983a, 1983b) more specific review and synthesis of the instruction literature identifies those variables that affect training and that the trainer can control. They include: objectives, content structure, instructional sequence, rate of delivery, repetition and practice, knowledge of results, and reinforcement and rewards.

Furthermore, the selection of instructional approaches depends on many criteria, such as conditions of learning, content, and characteristics of the students. Gagne specifically cites nine variables (1987): Gain attention, Inform the learner of the learning objectives, Stimulate the recall of prerequisite learning, Provide learning guidance, Elicit performance, Provide feedback about performance correctness, Assess performance , and Enhance performance and transfer.

Zemke and Zemke (1988) have further defined the specific needs of adult learners. The following are some examples: (1) In a classroom training situation, it is important that the environment be comfortable, both physically and psychologically; (2) Trainers must understand the participants' expectations of the course, because the self-concepts of the participants are involved., and (3) By serving as a facilitator or orchestrator, the effective instructor can manage the classroom by allowing participants to share their experiences and knowledge, can integrate new knowledge, and can provide strategies that will allow transfer of learning back to the job.

Clearly, the job of instructor is complex. And, while general instruction theories abound, the bulk of the practitioner training delivery advice in the literature is not grounded in research (see Pike, 1989). From the literature it is difficult to cull out the common training delivery problems and expert solutions to those problems being faced by novice trainers.

Methodology

The general methodology of the study involved surveying novice trainers and expert trainers. The novices identified their training delivery problems and the experts provided solutions to those problems. An overview of the general research methodology for this study is: (1) Survey trainers to determine the most frequent training delivery problems that novice trainers experience. (2) Analyze survey data and synthesize results into 10-15 major delivery problems, (3) Identify experts to respond to major training delivery problems experienced by novice trainers, (4) Survey the training experts through a questionnaire as to how they handle the identified training delivery problems, (5) Prepare job aids listing the training delivery problems, general solutions, and specific solutions, and (6) Prepare final report.

Survey of Novice Trainers

A questionnaire was developed to determine the training delivery problems most frequently encountered by novice trainers, Questions covered basic demographic information and problems the respondents encountered during their first two years on the job. The following open-ended question was used:

> *As a beginning trainer, what problems or difficulties did you encounter during the delivery phase (or presentation) of training. Please be specific and feel free to use the other side of this questionnaire.*

The first draft survey questionnaire was pilot-tested with twenty-five students in a University of Minnesota graduate-level training class and then revised.

The final questionnaire was then sent to the 984 members of the Southern Minnesota Chapter of the American Society for Training and Development. Of the 984 forms that were mailed, 420 (43%) were returned. Some of the returned forms were unusable for various reasons (e. g., blank, problems not listed, returned too late, etc.). The 371 (38%) usable questionnaires provide the data for the analysis. A list of 1,098 training delivery problems was derived from the 371 usable questionnaires.

Each of the 1,098 training delivery problems was printed on a note card and sorted into categories. The method used for sorting the data is known as the KJ Method: Affinity Diagrams (Mizuno, 1988). This method, developed by Kawakita Jiro of the Kawakita Research Institute, is used to analyze data that are elusive, confusing, and disorganized. Groupings are made by mutual affinity of the data. The process has seven steps: (1) Choose a theme, (2) Collect the data, (3) Put data onto cards, (4) Sort the cards into categories, (5) Label the cards, (6) Draw the diagrams, and (7) Present the data.

Essentially the technique is a right-brain process (Mizuno, 1988). Those involved in the sorting were directed to use their intuition and creativity to interpret and group the data, as opposed to sorting by rigid analysis and reasoning rules. Nine people were involved in the sorting process -two University professors, six graduate students, and one professional trainer. The four sorting teams worked in three pairs and one triad. Each expert team, A through D, was given one fourth of the cards. In their A, B, C, and D teams the cards were read slowly, once or twice. Cards that contained similar ideas were grouped together on the basis of their affinity or commonalty. After the cards had been grouped, the groups were labeled. The label consisted of words written on a blank card that conveyed the meaning of the cards in that group. The labeled groups of cards are then treated as a single card (Mizuno, 1988).

The twelve training delivery problems fell into three basic categories: (a) those pertaining to the trainer, (b) those describing how the trainer relates to the trainees, and (c) those pertaining to presentation techniques.

Selection of Experts

A variety of distinctions can be drawn between novices and experts. The major differences are intellect and experience. Because experts have a broader knowledge base than novices, they solve problems in a different manner. Experts have more focus, recognize cues that allow them to recall "chunks" of information, and are better able to integrate and interconnect knowledge. The knowledge that novices possess may be descriptive at a superficial level. In contrast, experts are able to troubleshoot and make interpretations about information. By using cues to access the stored knowledge they possess, experts are able to assess the situation at hand and devise an action plan that will work effectively (Thomas, 1988).

The goal of this aspect of the project was to establish a list of such experts in the field of training, specifically those who had distinguished themselves through their outstanding delivery skills. Once identified, these experts were presented with a list of the twelve most common training delivery problems faced by novice trainers as identified through the first survey. The experts were asked to respond to the problems with specific techniques they use to overcome similar problems during training presentations.

The potential experts were to be practitioners having a minimum of two years of experience and recognition by either colleagues or academicians as successful trainers. A nomination form was sent to the eight officers of the Southern Minnesota Chapter of the American Society for Training and Development to obtain names of experts. The twelve-member Training and Development Faculty at the University of Minnesota were also asked to nominate experts. Both groups were sent an identical form on which they were asked to nominate up to six people whom they considered to be expert "deliverers" of training. They were asked to provide the company name, address, and telephone number of the nominees. Three association officers responded and provided 15 names. The survey of the university faculty produced six (6) responses and 28 names. The total of 43 names was reduced to 36, because of duplication.

Survey of Experts

Questionnaires were sent to the 36 people who were identified as experts in delivering training. They were asked to respond to the twelve training delivery problems that had been identified as problems for novice trainers in terms of how they handle these problems.

Twenty (56%) surveys were returned. Most of the experts responded in detail to all of the questions. These responses were typed and sorted into categories. Similar responses were grouped using the KJ Method. The three or four solutions that appeared most frequently for each difficult training situation became the basis for the final list of solutions from the experts.

Analysis of Data

The primary data analysis revolved around the 1,089 training delivery problems of novice trainers collected through the survey questionnaire. A composite list of 12-15 general training delivery problems had been compiled when the four teams of experts had finished sorting their portion of the problems according to the KJ Method. Enroute, each team wrote its list on a chalkboard, explained the problems to the other teams and defended the rationales behind the problems. A matrix was developed to synthesize the topics into twelve training delivery problems.

The final list that emerged contained the summarizes the training delivery problem information collected by the first survey. The purpose of the first survey was to determine the major delivery problems of beginning trainers. The synthesis of this analysis is resulted in the "Twelve Most Common Training Delivery Problems of Novice Trainers."

The purpose of the second survey was to have experts propose solutions for handling these problems. It resulted in the "Expert Solutions To The Twelve Most Common Delivery Problems of Beginning Trainers." Essentially, it is a topical outline that synthesizes the solutions from the 20 experts against the 12 training delivery problems that novices experience. The combined data from the two surveys is presented in Figure 1.

Figure 1. Expert Solutions* to the Twelve Most Common Training Delivery Problems of Novice Trainers

1. **FEAR**
   - A. Be well prepared. Expert trainers have a detailed lesson plan, understand the material, and practice their presentation.
   - B. Use ice breakers. Experts use ice-breakers and begin with an activity that relaxes participants and gets them to talk and become involved.
   - C. Acknowledge the Fear. Experts understand that fear is normal, confront what makes them afraid, and use positive self-talk or relaxation exercises prior to the presentation.
2. **CREDIBILITY**
   - A. Don't apologize. Experts are honest about the subject matter and explain that they are either experts or conduits.
   - B. Have an attitude of an expert. Experts are well prepared and well organized. They listen, observe, and apply what they know to what the participants know.
   - C. Share Personal Background. Experts talk about their areas of expertise and the variety of experiences they have had.
3. **PERSONAL EXPERIENCES**
   - A. Report personal experiences. Experts tell their personal experiences, sometimes asking themselves probing questions to uncover them
   - B. Report experiences of others. Experts collect pertinent stories and incidents from other people and/or have participants share their experiences.
   - C. Use analogies, movies, or famous people. Experts use familiar incidents or situations in order to relate to the subject.
4. **DIFFICULT LEARNERS**
   - A. Confront problem learner. Experts use humor. They may also talk to the individual during a break to determine the problem or to ask the person to leave.

B. Circumvent dominating behavior. Experts use nonverbal behavior, such as breaking eye contact or standing with their backs to the person and inviting the others to participate.

C. Small groups for timid behavior. Experts find that quiet people feel more comfortable talking in small groups or dyads. They structure exercises where a wide range of participation is encouraged.

5. **PARTICIPATION**

A. Ask open-ended questions. Experts incorporate questions into the lesson plans and provide positive feedback when people do participate.

B. Plan small group activities. Experts use dyads, case studies, and role plays to allow people to feel comfortable, to reduce fears, and to increase participation.

C. Invite participation. Experts structure activities that allow people to share at an early time in the presentation.

6. **TIMING**

A. Plan Well. Experts plan for too much material, and some parts of the material are expendable. They prioritize activities so that parts may be deleted, if necessary.

B. Practice, practice, practice. Experts practice the material many times so they know where they should be at 15-minute intervals. They make sure there's a clock in the training room.

7. **ADJUST INSTRUCTION**

A. Know group needs. Experts determine the needs of the group at an early time in the training and structure activities and processes based on those needs.

B. Request feedback. Experts watch for signs of boredom and ask participants either during breaks or periodically during the session how they feel about the training.

C. Redesign during breaks. Experts find it helpful to have contingency plans and, if necessary, to redesign the program during a break. Redesigning during delivery is not advocated.

8. **QUESTIONS**

Answering Questions:

A. Anticipate questions. Experts prepare by putting themselves in the participant's place and by writing out key questions learners might have.

B. Paraphrase learners' questions. Experts repeat and paraphrase participants' questions to ensure that everyone has heard the question and understands them.

C. "I don't know" is okay. Experts redirect questions they can't answer back to the group' s expertise. They try to locate answers during breaks.

Asking Questions:

A. Ask concise questions. Questions are a great tool for experts. They ask concise, simple questions and provide enough time for participants to answer.

9. **FEEDBACK**

A. Solicit informal feedback. Experts ask participants, either during class or at the break, if the training is meeting their needs and expectations. They also watch for nonverbal cues.

B. Do summative evaluations. Experts have participants fill out forms at the conclusion of training to determine if the objectives and needs of the group were met.

10. **MEDIA, MATERIALS, FACILITIES**

Media:

A. Know equipment. Experts know how to fully operate every piece of equipment that they use.

B. Have back-ups. Experts carry a survival kit of extra bulbs, extension cords, markers, tape, etc. They also bring the information they are presenting in another medium.

C. Enlist assistance. Experts are honest with the group if there is a breakdown and ask if anyone can be of assistance.

Material:

A. Be prepared. Experts have all materials ready and placed at each participant's workplace or stacked for distribution.

Facilities:

A. Visit facility beforehand. Experts visit a new facility ahead of time, if possible, to see the layout of the room and to get an idea of where things are located and how to set up.

B. Arrive early. Experts arrive at least one hour in advance to ensure enough time for setting up and handling problems.

11. **OPENINGS AND CLOSINGS**

Openings:

A. Develop an "openings file." Experts rely on the many sources for ice-breaker ideas. Through observation and experimentation, they develop ideas and keep a file of them.

B. Memorize. Experts develop a great opening and memorize it.

C. Relax trainees. Experts greet people as they enter, take time for introductions, and create a relaxed atmosphere.

Closings:

A. Summarize Concisely. Experts simply and concisely summarize the contents of the course, using objectives or the initial model.

B. Thank participants. Experts thank participants for their time and their contributions to the course.

12. **DEPENDENCE ON NOTES**

A. Notes are necessary. Experts recognize that no one completely outgrows the need for notes.

B. Use Cards. Experts scale down their presentations to an outline or key words, which they write on note cards to use as prompts.

C. Use Visuals. Experts make notes on frames of transparencies and on their copies of handouts.

D. Practice. Experts learn the script well so that they can deliver it from the keyword note cards.

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*Based on a survey of 371 novices and 20 experts.

Summary and Conclusions

This study had three major focuses: (a) to determine what trainers considered to be the most frequent training delivery problems they faced as novices, (b) to determine how experts respond to these problems with solutions they have found to be effective, and to (3) present the findings in a useful manner for practitioners. The conclusions from each of the two distinct surveys within the study formed the research base for the major outcomes-- the 12 most common training delivery problems novice trainers experience and expert solutions to these problems.

While advice and speculation abounds about best practices in training, little research is available about the practical problems novice trainers face. Other novice trainer problems should be researched following the general methodology of this study. They should pursue a specific and/or narrow frame of questions and use of open-ended questions which will likely result in the excellent response from both novices and experts. The resulting researcher's problem of dealing with large pools of qualitative data is lessened with new analysis methods such as the KJ Method.

Given the theory-to-practice gap that haunts the training profession, the general novice-expert methodology used in this study may be helpful in closing that gap.

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Refereed Journals: The Cornerstone of a Developing Profession

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The Human Resource Development Quarterly, a refereed journal, is in its seventh volume. The journal provides an outlet for scholarly presentation and debate of HRD issues as counterbalance to the popular press. It fosters community among multi-disciplinary professionals. Authors, reviewers, and board members represent a wide range of field backgrounds, research methodologies, experience levels, and foci. Acceptance rate is about 30%. Suggestions are made to enhance the possibility of potential authors having their manuscripts accepted.

Every academic field is marked by its literature. The more mature the field, the more developed are the scope and quality of the literature available to its members. Throughout its relatively young life, the field of human resource development, and its component fields of organization development, personnel training, and career development, have been well served with quality, practitioner-oriented journals and newsletters. The same, however, cannot be said of the scholarly or academic literature available to members of the profession. In fact, perhaps more than many fields, human resource development has been susceptible to the whims and fancies of fads as they come and go–from programmed instruction to accelerated learning, re-engineering, adventure learning, right- and left-brain theories, Myers-Briggs Temperament Indicator, learning organizations, appreciative inquiry, large group strategic planning, and the endless list that confronts us at every conference and in each new "best-seller" in the field. Finally, HRD is beginning to mature, as marked by the journals now emerging, some of which are represented at this conference.

The *Human Resource Development Quarterly* (*HRDQ*) plays an important role in this field's maturing process. In the beginning, there was a long gestation period before the *HRDQ* was birthed by the Research Committee of the American Society of Training and Development with ASTD as the sponsor, the (then) Training and Development program at the University of Minnesota as its temporary home, and Jossey-Bass as its publisher. This relationship continues today, with the addition of The Ohio State University, the home of our associate editor, Ron Jacobs.

But everything is not the same. The maturing process moves on. The Academy of Human Resource Development from its inception has recognized the *HRDQ* as its journal, distributed to all of its members. The American Society of Training and Development has now made the *HRDQ* one of three options to be provided to all members at no additional cost beyond membership, and we anticipate even more subscriptions through ASTD's reduced subscriptions to those not selecting that option.

Purpose

In the first issue, Swanson (1990) described a vision for the role that the *HRDQ* could play:

> Many of us see *HRDQ* as the start of a community of HRD scholars. I believe this research quarterly will provide the intellectual footing and research credibility HRD requires to mature as a field of study and practice. (p. 2)

Swanson went on to describe the eclectic nature of the HRD field, coming as it does from such diverse backgrounds. The hope of the early champions was that the *HRDQ* would serve as a

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venue for a wide range of backgrounds of authors committed to HRD, whose publications previously appeared in the foundational areas of their expertise but were then not widely available to others in the HRD field. Experience has borne this out. Authors have come from adult education, vocational education, mineral engineering management, public administration, management, political science, labor education, industrial relations, and many more. Practitioners and consultants, in addition to academics, are also authors.

Another form of inclusiveness to which *HRDQ* has been committed has been to provide outlets for both quantitative and qualitative research (as imperfect as these descriptors might be) and to integrate the philosophies of human development and human capital.

Format Used to Meet Purpose

From the beginning, the format of the journal has remained the same:

* a feature article, usually refereed, with one or two invited responses, with the opportunity for the feature article author to respond
* refereed articles, usually two to three per issue
* forum section, which includes non-refereed articles that are designed to explore controversial concepts within the field, challenge existing theory, suggest research hypotheses that have not yet been tested, respond to articles published earlier, and so on; again, usually two to three per issue
* media reviews, including materials that might not fall obviously into human resource development, such as research, economics, and future studies, for example; again, generally two to three per issue

It is not always easy to stay with this format. Getting the right mix of manuscripts in time to assemble an issue requires lots of coordination, hard work, and just plain luck! The most difficult task, for me, has been identifying an appropriate feature article in sufficient time to identify invited reaction authors, and it has been even more problematic to get the reactions to the feature author for a "final word."

Success in Meeting Purpose

How successful have we been in meeting these specific diversity objectives? With the number of manuscripts received exceeding 325, we continue to receive a wide range of recommendations (from 4 or 5 reviewers) on every manuscript, reflecting, I think, the diversity of reviewers available to us. One of our ongoing struggles as editors is to determine our roles vis-a-vis the role of the reviewers in determining which manuscripts to pursue for publication. Another interesting phenomenon, from my perspective, is the ease in finding manuscripts for the forum section as compared with the refereed section. Finding a "Feature" article is an even more difficult task.

I believe that we have filled at least a small role in providing opportunities for fields within HRD to talk with one another, and this has created synergy within the field. Yet, just as the Academy continues to struggle to answer the dilemma of what some perceive to be a dichotomy between theory (research) and practice, so, too, do we struggle in the *HRDQ* to find adequate ways to reflect research and practice interests (through, for example, the Refereed section and the Forum section). Our emphasis on quality has been strengthened by the institution of the Richard A. Swanson Award for the Outstanding *HRDQ* article in each volume, sponsored and staffed by the Research Committee of the ASTD.

With other fine journals around, is there a need for the *HRDQ*? That's difficult to measure. We have had an adequate flow of manuscripts, but obtaining the quality desired has not been as easy. Yet, we believe that we have not had to compromise on quality, and through six volumes, we have met our page length goals and have submitted manuscript to the publisher (close to) on time. Thus, there does appear to be a need for this outlet for authors. Another way to

view this question is through subscription data. As of December, 1995, there were 1,845 subscribers, the majority of whom are individuals, with others being libraries, corporations, and academic departments. This represents a growth of 100 from this time last year. And the changes in ASTD's subscription process will surely increase this by two to three thousand.

Another objective that has never been stated explicitly, but has clearly been met, has been to provide an outlet for advanced graduate students' work. While media (books, software, video) reviews have been primary outlets, even including instructor assignments from which one or two might be of sufficient quality for publication, advanced graduate student authors have made significant contributions to the forum and even the refereed sections of the journal. We have also reached an agreement with the Donald Bullock Outstanding Dissertation Award Committee of ASTD to publish an article based on the winning dissertation each year.

Another area of diversity in which we have interest is supporting and encouraging a wide range of research methodologies, including both quantitative and qualitative approaches. In spite of that desire, however, a customer survey just completed by Jossey-Bass to determine reactions of subscribers to the journal found that, while there were very few concerns about the journal, and that there was widespread agreement that the scholarly level of the journal was appropriate, there was a feeling that there were too many quantitative articles. To check the validity of this observation, I analyzed the 13 refereed and 10 forum articles published in volume 6 (omitting the invited reactions). Of the 13 refereed articles, 8 were positivistic (descriptive, experimental, relational, quasi-experimental), while 5 were qualitative (one each of interpretive, case study, historical, grounded theory, and review of literature). Of the 10 forum articles, 1 was positivistic, 4 were reviews of literature, and 5 were opinion or "thought" pieces. So perhaps in the refereed section, there is some validity to the observation. But then the question arises as to the "proper" balance. Is it half and half? Our editorial approach has been to encourage every type of research and to hold each to standards of quality appropriate for the type of research methodology used. The reality is that we continue to receive a preponderance of positivistic manuscripts. Perhaps it will take the new generation of graduating students who have received greater emphasis on qualitative research methodologies to change this situation.

How Can HRD Professionals Become Involved with the *HRDQ*?

In addition to being consumers, HRD professionals can participate in the life of the *HRDQ* in many ways:

1. ***As an author in the refereed section*** These 20-25 page manuscripts need to meet the rigor of criteria applied to research and are reviewed by a panel of five.
2. ***As an author in the forum section*** These manuscripts--thought pieces, pilot studies, reactions to previously published articles, and so on, are generally much shorter than those in the refereed section and are reviewed by the editor for acceptance.
3. ***As a media reviewer*** Each issue contains a review of books, software, videotapes, and other media. Material for review is provided if desired. The publication date must be within a year of being current. These manuscripts are reviewed by the associate editor for acceptance.
4. ***As a referee/reviewer*** We are always in need of reviewers for submitted refereed manuscripts. We want scholars who are themselves published in refereed journals who are willing to make the professional contribution of a significant amount of time to produce quality reviews. We are especially in need of people with skills in various qualitative areas of research, and, at the moment, we need people with some background in the broad field of human resource management.
5. ***As an editorial board member*** Each year, we replace two to three board members for a three-year term. The commitment required is to attend the annual board meeting, associated with the AHRD annual conference, and to participate actively in supporting the journal during the year.

6. ***As associate editor and editor*** Every four years, a new associate editor is selected. Ron Jacobs will succeed to editor beginning with Volume 9 (beginning in mid-1997). An associate editor will be selected early in 1997. The commitment is for eight years: four as associate editor and four as editor. This person will normally come from the editorial board or, at minimum, the pool of referees/reviewers.
7. ***As a booster*** Does your library subscribe to the *HRDQ*? Does your company (or a company you know) support the *HRDQ* as a contributor or supporter? Both of these processes are critical to the ongoing survival and success of the journal.

Participation in any one of these roles will forward the agenda of human resource development, as well as provide a platform for the participant's own personal growth and development. The editorial staff is very willing to work with anyone in any of these roles to improve the possibilities of success in completing the desired task.

How Can Authors Increase the Possibility of Publication?

Every manuscript has its own idiosyncrasies. Having said that, however, there are definitely things authors can do to improve the odds of having their manuscript selected. Based on my review of over 300 manuscripts submitted to the *Human Resource Development Quarterly*, and at least 100 more as Executive and Consulting Editor for the *Journal of Education for Business*, and as chair of the editorial board of the *Journal of Vocational Education Research*, here are suggestions for handling the most frequently occurring problems faced by authors. Some are easily remedied; others are more difficult.

1. Use the format specified by the journal, no matter how inappropriate you believe them to be or however unfamiliar you may be with the style. *HRDQ* requires the use of the fourth edition of the *Publication Manual of the American Psychological Association* (American Psychological Association, 1994). It has been quite amazing to me how many authors totally ignore this requirement. When manuscripts are returned to be put into this format, the revisions often come back incorrectly using the specified style. It is difficult to believe that authors actually think that editors will do this for them.
2. Have your article edited by someone with excellent writing skills, even if you have to pay for it. Often, we receive reviews back from reviewers with negative recommendations for publication, yet the comments made hardly address content. The writing is often so poor that reviewers are not able to see past the poor writing.
3. Review guidelines before submitting the article. How many copies are required? (We require six.) Who are the copies to be sent to? (We want them sent to the editor.) What is required to insure a "blind" review? (We request a separate title page that can be removed prior to blind review, and all references to "my work" or any other internal references that would provide clues of authorship must be removed.) Failure to follow these guidelines can add measurably to the time required for the review process.
4. Make the relevance to HRD clear and explicit. Our experience is that we receive many manuscripts that are implicitly appropriate for publication in the *HRDQ*, but the authors leave it up to the reviewers, and ultimately the readers, to make the connection. We want such connections to be explicit.
5. Describe methodology completely. Readers should not be left guessing about what was done or why it was done. This section doesn't have to be lengthy, it just has to be complete.
6. Avoid the formalities of a dissertation. Over the years, traditions have developed about the format and structure of a dissertation. Because most graduate students do not get the experience of writing for publication, their own model for writing continues to be the dissertation. Such structure is not appropriate for a published article. Potential authors are, hopefully, subjected to reading lots of journal articles. These should be examined

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prior to writing for publication. As just one example, hardly ever are hypotheses listed in a journal article as they often are in dissertations.

7. Be internally consistent with the methodology of your study. If your methods section indicates that certain steps were followed, the reader should legitimately expect that the findings would reflect these steps. If a qualitative study is described, then one should expect to see this methodology carried out throughout the article.
8. If your study is positivistic, and you are wanting to generalize your findings, be sure that the population is defined, your sampling is described, and your sample is adequate. Response rate also has to be adequate, or the burden of the argument is on you to make the case for its acceptability.
9. In positivistic studies, you must provide reliability and validity data. These are not optional requirements; they are essential in supporting the appropriateness of the findings presented.
10. If your manuscript includes statistical analyses, provide a computer disk of your raw data. All of our statistical manuscripts are reviewed by a statistical reviewer. If a computer disk is available, assumptions behind the statistical tests can be checked and alternatives explored. If the disk is not available, long, complex letters may be required, and both parties may be left discontented with the results.
11. A qualitative study is not an excuse for a lack of rigor. In some ways, there is still a struggle going on about what criteria to use in evaluating a study that does not use traditional positivistic approaches. Our experience with reviewers, however, is that there is a belief that qualitative articles do not generally meet quality standards--not because qualitative articles are less acceptable for publication (they aren't), but because the same rigor is often not applied.
12. Respond to the editors' feedback quickly. We make detailed recommendations to every author on ways in which the article can be improved. It then becomes the author's responsibility to respond to those suggestions, either by incorporating the changes into the manuscript or by telling the editors why those suggestions are not appropriate and why they have not been incorporated into the manuscript. Getting the revisions back to the editors quickly can also enhance the probability of publication. In any case, it will definitely be given faster consideration.

Where Do We Go from Here?

A journal that has just completed six volumes is still an infant in the field of publishing. The *Human Resource Development Quarterly* is still maturing, looking for ways to improve on a continuous basis, with the commitment to enhancing the HRD field for everyone--academicians, practitioners, professional organizations, organizations needing to be aware of cutting edge research, employees, and everyone whose lives are touched by HRD.

I would be pleased to receive feedback that will help us do this. Our editorial staff is available to talk with you about any aspect of your involvement with the journal.

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Improving Performance from Theory to Practice with Rigor and Relevance: Performance Improvement Quarterly

Peter J. Dean
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Editor, Performance Improvement Quarterly (PIQ)

Based on the first seven years of leadership by Boyd Richards and Bill Coscarelli, past editors of PIQ, the articles published in the journal underwent a rigorous review process which helped established a foundation of scholarship that was relevant to the field of Human Performance Technology (HPT). Selected highlights of that body of literature and other HPT publications are presented below for authors to review when researching performance improvement and when submitting articles to PIQ.

Historical Roots of Human Performance Technology (HPT)

The International Society for Performance Improvement (ISPI) has always been the organization where professional practitioners (internal and external consultants) and professors could convene to have a dialogue about the consequences of the interaction between the individual workers in an organization and their environmental work system. The late Tom Gilbert, known as the Father of Human Performance Technology, helped to found ISPI in the late sixties. A graduate of The University of Tennessee and The University of South Carolina, a professor at The Universities of Alabama and Georgia, a co-worker with B.F. Skinner at Harvard University, a business partner with Geary Rummler (1991) in the 1970's, the author of the acclaimed 1978 book entitled *Human Competence: Engineering Worthy Performance* and an accomplished performance engineer in over 300 organizations, Tom was both an academic and a practitioner and did much to inspire the founding of PIQ (Dean, 1994). His work was inspired by such luminaries as Frederick Taylor, Kurt Lewin and B.F. Skinner. Marilyn Gilbert, who also worked with B.F. Skinner, carries on with Tom's work translating his theoretical concepts into practical accomplishments through proven models, measures and methods (Gilbert and Gilbert, 1989).

Of course, other scholars and practitioners helped begin the performance movement in the 1960's. A selected list of ISPI members includes: Bob Mager, Joe Harless, Roger Kaufman, Peter Pipe, William Deterline, Don Tosti, George Odiorne, Robert Morgan, Robert Gagne', Ivor Davies, Odin Westgaard, Dick Lincoln, Gabe Olfiesch, and Ed Schor. If the above list of key contributors is unknown information to the reader, then let this article serve as a starting point for further contributions to the field of performance improvement. These pioneers underscored the need for trainers in the Human Resource Development (HRD) community to continue to acknowledge the dual responsibility to the individual and to the environment in influencing performance. With this understanding, we can continue to expand the research beyond the effectiveness of well-designed individual training programs to include the value of the impact of organizational system change on performance. Yet, we must ask if research in HRD (workforce training and development) and in HPT (workplace performance improvement) can have a relevant impact in the world of work.

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The Relevance of Research in HPT and HRD

The ideal of meaningful work with adequate monetary and psychological incentives and rewards is a goal that is characteristic of the philosophy upon which the United States of America is built. This founding philosophy recognizes that a country which becomes strong and remains globally competitive does so primarily because a majority of its individual members contribute positively through their work, their social actions and their financial activities towards the ideas and ideals which it espouses.

A major portion of one's life in such a macro-system is devoted to employment or the means of earning a living. One's employment influences the home and family, educational opportunities, social contracts, life style and leisure activities. Thus, one's preparation for employment and continuous learning thereafter is crucial toward accepting his or her rightful roles and responsibilities of the American society. Implicit in today's ever-changing market place is the need to secure and maintain a position of competitive advantage and strength. This can only be achieved by the people working in the system who have accepted their responsibility as a citizen. This requires that our businesses, industries, school systems and government agencies work in alignment to properly prepare the American worker through individual training and development (or HRD) and prepare those who manage the organizational ecology of a work system with the knowledge of workplace performance improvement (or HPT). Peter M. Senge (1990; Dean, 1995) called this understanding the organization as a system and understanding the internal and external forces driving change.

In the USA today, the most powerful vehicle for global competition and social change is business and industry. School systems and government agencies represent the infrastructure of the USA that supports business and industry. The most critical resource available to business, industry, the school system and government is the American worker. For these people to be meaningfully involved in their work and optimally productive for their organizations, an integrative interface among their work, the workplace and the workers themselves is required. The primary focus of HRD and HPT is the alignment and effective functioning among the work, the worker and the workplace within the organizational ecosystem. Other human ecosystems that impact the productivity of a worker include the family and the community. Workers draw their productive strength from all these human ecosystems: the family, school and the community. HPT and HRD can contribute its worth to the world of work in alignment with these human ecosystems.

HRD and HPT excel in a number of different but closely associated areas to develop and adapt the theories and practices necessary for a high performing workforce working in productive workplaces where workers perform meaningful work. This is possible because HPT and HRD draw from a multidisciplinary research base including:

Communications Theory
Educational Psychology
Human Development Theory
Instructional Psychology
Information Technology
Instructional Systems Design
Industrial Psychology
Learning Theory
Management Theory
Occupational Education and Development
Organizational Design and Development
Organization Learning
Sociological Theory
Systems Theory

The relevance of research in HRD and HPT enables organizations and institutions to apply theories in the context of work which in turn hopefully allows the individual to positively contribute to a democratic society by-way-of meaningful and productive performance. PIQ is committed to disseminating the research relevant to improving performance in the workplace.

Award-winning PIQ Articles, Special PIQ Issues and HPT Books

One of the practices of HPT is to provide exemplars that illustrate the best practice and serve as an example for future practice. Listed below are articles and books that emerged from ISPI membership between 1986 and 1995. It would be useful to refer to them prior to the submission of an article to PIQ.

Articles

School Reform and Restructuring: Does Performance Technology Have a Role. Sharon A Shrock, PIQ Volume 3, #4.

The TIP Theory: Prescriptions for Designing Instruction for Teams. Richard A. Armstrong and Charles M. Reigeluth, PIQ, Volume 4, #3.

Needs Assessmen: - A Critical Reappraisal. Theodore Lewis and David C. Bjorkquist, PIQ, Volume 5, #4.

Instructional Designers, Decisions and Priorities: A Survey of Design Practices. John Wedman and Martin Tessmer, PIQ, Volume 6, #2.

Behaviorism, Cognitivism, Constructivism: Comparing Critical Features from a Design Perspective. Peggy Ertmer & Timothy Newby, PIQ, Volume 6, #4.

Designing Scenarios for Human Action. John M. Carroll, PIQ, Volume 7, #3.

Special Issues

Electronic Performance Support Systems. Edited by Gloria Gery, PIQ, Volume 8, #1.

The Changing Role of Human Performance Technology. edited by Diane Gayeski, PIQ Volume 8, #2.

Performance Technologist Preparation: Investing in Our Future. Edited by Ali Carr, PIQ, Volume 8, #4.

Books

Human Competence: Engineering Worthy Performance. Tom F. Gilbert, ISPI Publications, Washington D.C.

Handbook for Human Performance Technology. Edited by Harold Stolovitch and Erica Keeps, Jossey-Bass, San Francisco, CA.

*Improving Performance: How to Manage the White Space on the Organization Chart..*Geary Rummler and Alan Brache, Jossey-Bass, San Francisco, CA.

Analysis for Improving Performance. Richard S. Swanson , Berrett-Koehler Publishers, San Francisco, CA.

Performance Engineering at Work. Edited by Peter J. Dean, IBSTPI and ISPI Publications.

Conclusion

This paper addressed the need to expose authors to the historical roots of performance improvement, the individuals who pioneered ISPI, HPT and PIQ, and the publications that resulted. References to these bodies of work in future publications would be appropriate if one desired to maintained a connection with the early literature in performance improvement.

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Gilbert, T.F. and M.B. Gilbert. Performance Engineering: Making Human Productivity a Science, *Performance and Instruction*, January, 1989.

Introducing *THE INTERNATIONAL JOURNAL OF TRAINING AND DEVELOPMENT*

William J. Rothwell
The Pennsylvania State University

Many observers of the HRD field have long felt there was a need for a major journal in the field that would focus internationally, doing what is possible to bring together the scattered research going on around the world. That led to The International Journal of Training and Development, sponsored by Blackwell's.

The Journal's Scope

The *International Journal of Training and Development* (IJTD) aims to provide an international forum for the reporting of high-quality research, analysis and debate for the benefit of the academic and corporate communities as well as those engaged in public policy formulation and implementation. The scope of the *Journal* is training and development, broadly defined. That includes the determinants of training, training and development practice, and policy and strategy.

The Determinants of Training. Examples of appropriate topics include:

- Specifying and testing the explanatory variables which may be related to training
- Identifying and analyzing specific factors which give rise to a need for training and development as well as the processes by which those needs become defined, for example, training needs analysis
- The need for performance improvement
- The training and development implications of various performance improvement techniques, such as appraisal and assessment
- The analysis of competence

Training and Development Practice. Examples of appropriate topics include:

- The design, development and delivery of training
- The learning and development process itself
- Competency-based approaches
- Evaluation: the relationship between training and individual, corporate and macroeconomic performance

Policy and Strategy. Examples of appropriate topics include:

- Organizational aspects of training and development
- Public policy issues
- Questions of infrastructure
- Issues relating to the training and development profession

The *Journal's* scope encompasses both corporate and public policy analysis. International and

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comparative work is particularly welcome, as is research which embraces emerging issues and developments.

The IJTD publishes research which ranges from the theoretical, conceptual and methodological to more policy-oriented types of work. Research may or may not be empirical and may be qualitative or quantitative.

The Journal's Emphasis

Because the principal purpose of the IJTD is to encourage an international dialogue in the field of training and development, the editors are particularly interested in work which is international or comparative.

The Journal also seeks to be genuinely multidisciplinary and this concern is reflected in editorial policy. Articles adopting an interdisciplinary approach are particularly welcome.

The IJTD's editors are keen to strengthen the links between academic work and policy and practice and wish to encourage research which can demonstrate a potential significance in this respect.

Submission of Articles

The Journal takes a unique approach. This section describes that approach as well as the referee process, desired manuscript length, number of copies to submit and other information relevant to article submission.

Approach. The Journal is focused on an international, multidisciplinary readership that links academic work and professional practice.

International Readership. The IJTD has an international readership. It is likely that only a minority of an article's readers will be in the country of the author. Contributors are asked to bear this in mind, for example, in the use of language and in making any assumptions about the reader's knowledge of the country in which the research has been undertaken. Authors would ensure that their articles are intelligible to those who may not be familiar with the traditions, infrastructure and policies of their particular countries. It is likely that one of the referees asked to comment on an article submitted for publication will be from a country other than that of the writer.

Multidisciplinary Readership. Any terms, concepts or methods which are specific to a particular discipline should be explained so that they can be understood by readers from outside that discipline.

Links Between Academic Work and Professional Practice. The IJTD is read by practitioners and policy makers as well as by academics and it is part of editorial policy that the Journal provides a bridge between academic work and professional practice. Where appropriate, authors should indicate any potential significance that their work may have for training and development policy and practice.

Refereeing. All articles submitted to the IJTD are sent out for refereeing under the conventional 'double blind' system.

Length. Articles should be between 5000 and 9000 words in length. An accurate word count (including references) should be provided. Tables and figures should be counted by treating the space they occupy as an equivalent number of words.

Number of Copies and Format. Four copies of articles are required. They must be typed on A4 paper, on one side of the paper only, double-spaced and with margins. Each copy should have a cover sheet containing its title and the name of the author(s). All work submitted should be checked

carefully for typing errors, spelling mistakes and other faults. Pages must be numbered.

Footnotes and References. Footnotes are additional material which, while amplifying the text, are more conveniently discussed separately. They should be marked in the text by the use of asterisks (*) and daggers (†) and placed at the foot of the relevant pages. They should, however, be kept to a minimum, and wherever possible, be incorporated into the text. References indicate the precise sources of books, articles, statistics etc. cited in the text. These should be marked by the usual convention of numbers and grouped together at the end of the article. Examples are provided below:

Footnote. Examples of footnote style are shown below:

In the text	It should be stressed, however, that in Britain apprenticeship was historically given little state support and government intervention was minimal.*
At the foot of a page	*Under the sixteenth century Statute of Artificers, an apprenticeship was a legal requirement for practicing certain trades. This was narrowed by common law judges and abolished in 1814.

Reference. Examples of reference style are shown below:

In the text		They also sought to develop modular methods of training, to increase the amount of off-the-job training, and to set new standards for apprenticeships which placed less emphasis on time-serving [10].
At the end of the article	10	Senker, P., *Industrial Training in a Cold Climate*. Avebury, Aldershot, 1992, Chapter 7.

Tables and Graphs. These must be numbered consecutively, checked for accuracy and clearly presented. Extensive use of either should be avoided to minimize printing costs.

Mathematical and Econometrical Material. Algebraic equations and models should be used only when they clarify or advance the argument. Where used their implications should be discussed in the text while data and methodological discussions are confined to a technical appendix.

Copyright. Authors must indicate if their articles have been submitted or published elsewhere even if in a different form. If subject to copyright then clearance must be obtained and sent to the Editor. Work which is to be in a book prior to its publication in article form is not acceptable. All articles published in the IJTD are subject to the Journal's copyright and may not be published elsewhere without the Journal's consent.

Autobiographical Note. Each contributor should supply, with his or her manuscript: full name, postal address, telephone number, fax number, appointment or job description, name or organization (and whether this may be published) and a summary of experience, achievements and qualifications, whether business, professional or academic. The autobiographical details will be used for the "in this issue of IJTD" page.

Abstract. Authors should include four copies of an abstract of 100-150 words, double-spaced. This should be on a separate sheet containing the title of the article but no material by which the author(s) can be identified.

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Submission of Other Materials

Books for Review. Review of significant books are commissioned by the Managing Editor.

Register of Current Research. This will provide the basis for an occasional feature in IJTD. Researchers wishing to publicize their work should send concise summaries to the Managing Editor.

Editorial Addresses

USA and Canada. In the U.S.A. and Canada, submit articles to:

- Professor William J. Rothwell
  North America Editor
  International Journal of Training and Development
  Department of Adult Education, Instructional Systems and Workforce
  Education and Development
  The Pennsylvania State University
  104 Rackley Building
  University Park PA 16802-3202
  United States of America
  Tel: +1 814 863 2581
  Fax: +1 814 863 7532

Rest of the World. In the rest of the world, submit articles to:

- Pam Arksey
  Managing Editor
  International Journal of Training and Development
  Department of Human Resource Management
  The University of Strathclyde
  Graham Hills Building
  Glasgow G1 1XT
  United Kingdom
  Tel: +44 (0) 141 552 4400
  Fax: +44 (0) 141 552 3581

Publishing in *Adult Education Quarterly*

John M. Dirkx
Sean Courtney
University of Nebraska - Lincoln

This article provides an overview of Adult Education Quarterly (AEQ), including a discussion of guidelines for preparing and submitting a manuscript for publication, the process used to review manuscripts, and reflections on the future of research and publications in our respective fields.

The purpose of this article is to familiarize the reader with the scope of *Adult Education Quarterly* (AEQ), kinds of articles that are published in this journal, how it relates to the field of HRD and other journals in adult education, its editorial policies and guidelines, and how its current editors view the future of research within the fields of HRD and adult education. The views that are expressed in this article reflect those of the current editors and not necessarily the field as a whole or *AEQ*'s sponsoring agency.

Background of the Journal

The journal was originally founded in 1929 as *The Journal of Adult Education* but the name was changed in 1983 to *Adult Education Quarterly (AEQ)*. In its more formative years, the journal sported many opinion and descriptive pieces, the thoughts of leading adult educators, musings on the growth and direction of the nascent discipline called "adult education", and the first glimmerings of theory and research. Over the years, various comparative surveys of the journal have noted the trends and themes of most interest to authors and researchers. The journal has increasingly emphasized research and theory within the field of adult and continuing education. Currently, this emphasis represents the primary focus of *AEQ*.

AEQ represents one of a number of publications throughout the world that are devoted to issues related to adult learning. The journal enjoys the reputation of being the premier North American research journal representing the field of adult education, and is one of only a handful of journals in the world dedicated to research and theory in adult and continuing education. Journals such as *Convergence*, the *International Journal of Lifelong Education*, and *Studies in Continuing Education* represent the international reach of research and theory in the field. *AEQ* is also a frequent outlet for adult education scholars across the globe. The continuing learning of adults is, however, also of concern to the professions. It is not uncommon to find related journals, such as the *Journal of Nursing Continuing Education*, addressing the subject of adult learning. Other journals, such as *Adult Learning*, deal more directly with and attempt to specifically address practitioner concerns. Scholars within the field of HRD who are concerned with matters of theory and research impacting the adult as learner can find publishing outlets in many educationally-based journals here in the United States, in Canada, and abroad. Insofar as the field of adult education can be judged to include issues around training and settings which include business and industry, AEQ has over the years reflected in its pages theory and research of an HRD nature.

Editorial Policy

Adult Education Quarterly (AEQ) is committed to the dissemination of knowledge derived from disciplined inquiry in the field of adult and continuing education. With a circulation of about 5000, *AEQ* is published January, April, July, and October, under the sponsorship of the American

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Association for Adult and Continuing Education (AAACE). *AEQ* publishes articles representing a broad range of methodological approaches, including: a) empirical studies which use critical, action, participatory, experimental, quasi-experimental, correlational, descriptive, historical, philosophical, qualitative, or interpretive methods; b) theory-building articles; c) interpretive reviews of the literature (position statements or reasoned critiques of articles previously printed in *Adult Education Quarterly*); d) essay reviews (commissioned by editors); and e) book reviews. We have continued having a forum section, which is designed to publish shorter position papers related to the field. As of the Spring, 1996 issue we are initiating a "Letters and Opinion" section in the Journal. This section will provide readers with an opportunity to express particular views and responses they may have to articles published in *AEQ*.

For featured manuscripts and Forum articles, three broad criteria are used in the review and selection process. First, articles must be important in that they significantly advance knowledge and theory. Second, all material must be accurate and technically sound. Finally, articles must be well crafted; that is, they must be clear and well organized. In preparing a manuscript for submission, authors are encouraged to consider the following strategies:

1) Study the Editorial Policy and its sections on guidelines to insure that your manuscript falls within the scope of the journal and will meet stylistic requirements.

2) Consider the Review Criteria (Section E of the Editorial Policy) in developing and crafting your manuscript.

3) Study back issues of *AEQ* and its predecessor, *Adult Education*, focusing especially on articles of purpose and form similar to your manuscript.

4) Ask at least two colleagues who are objective and honest in their appraisals to critically review the manuscript before submitting it to *AEQ*.

Manuscripts submitted to *Adult Education Quarterly* must be grammatically correct and stylistically consistent. The journal uses the *Publication Manual of the American Psychological Association* (APA), Fourth Edition. Potential authors should consult this publication for rules governing references and citations as well as other elements of grammar and style. All manuscripts need to be typed, double-spaced and the author(s) need to submit four copies, retaining a copy for their own files. The editors are not responsible for returning copies to authors. Articles generally should not exceed 5000 words, including charts, tables and bibliography. Potential authors are strongly encouraged to obtain and follow Editorial Policy Guidelines for specific information on technical requirements for manuscript preparation.

Manuscript Review Procedures All manuscripts submitted for consideration for publication in *AEQ* are subjected to a systematic review process. The manuscript is first examined to determine if it conforms to the editorial guidelines for the journal (i.e. if it is "in scope"). Manuscripts considered to be "out of scope" are returned to the author(s) with a brief cover letter explaining that they are not acceptable for publication by *AEQ* in their present form and no further review of the manuscript is conducted. Manuscripts determined to be "in scope", as defined in the "guidelines for contributors" (see attachment), are submitted for further review to a panel of consulting editors (CE). Typically, three individuals from this panel are selected to review each manuscript, based on background expertise and knowledge. Decisions as to who will be asked to review the manuscript are made on the basis of the nature of the research question or topic of the manuscript, the nature of the methodology employed, and the availability of CEs. The review process is "double blind," meaning the CEs do not know the identity of the author(s) and the author(s) do not know the identities of the reviewers. CEs are requested to return their reviews within five weeks of the date in which it is sent out. CEs who have not returned their reviews with this time are contacted and requested to complete their reviews as soon as possible. In the event that a particular CE cannot complete the review within this time frame, another CE may be selected for the manuscript in question.

After all reviews have been returned to *AEQ*, they are examined by the editors and final determinations of a) Accept, b) Conditionally Accept, c) Reject and Encourage resubmission, or d) Reject are made, based on the information provided by the CEs. Final decisions on each

manuscript are made by the editors of *AEQ*. Letters are then prepared informing the author(s) of the editors' decision. For manuscripts falling into categories (c) or (d), *AEQ* has no further obligation to the authors. The authors are free to re-submit revised manuscripts but they are informed that these submissions will be subjected to a new full review process. Manuscripts falling into category (a) are, for the most part, ready to publish "as is," with little if any revisions required. Manuscripts falling into the "Conditionally Accept" category require at least some revision before they will be fully accepted for publication. The conditions that must be met before this happens are carefully detailed in cover letters to the authors of these manuscripts. These letters clearly specify that the manuscript will not be published until these conditions have been met to the satisfaction of the editors. In some instances, the revised manuscript may be sent to one or more of the CEs who initially reviewed it for their feedback. When the conditions have been satisfied the authors are informed by letter that the manuscript is now ready for publication.

When a manuscript is accepted, the author will be notified and informed about the next steps in the publication process. To expedite the editing and publishing process, authors of accepted manuscripts will be asked to provide their final version on IBM-compatible or Macintosh floppy disks. Manuscripts produced using WordPerfect 5.1 for DOS or Microsoft Word 4.0 through 5.1 for Macintosh are preferred.

Manuscripts submitted to *AEQ* should not be under consideration for publication by any other journals, nor should they have been published previously in any form (see "Warrant Statement" in Section C). A paper may, however, have been presented at a meeting or conference. In such cases the author should state where and when such a paper was presented. After acceptance, a paper may not be published elsewhere without written permission from AAACE.

Review Criteria The following are used to review research papers submitted to *Adult Education Quarterly*:

1) *Importance of the Problem*. A problem or subject addressed by a manuscript should contribute to knowledge or theory pertinent to adult and continuing education. Importance is enhanced when a paper promotes understanding, or improvement of practice.

2) *Background*. Through the abstract and a brief introduction, readers should be provided with sufficient background information to understand the problem being addressed.

3) *Purpose*. Whether stated generally or in greater detail—as is the case with hypotheses—the purpose of the paper should be clearly and unambiguously stated.

4) *Literature Review*. Research and scholarship should be linked to relevant literature and theory. The applicability of the research and the quality of the discussion are more important than the length of the review.

5) *Approach and Procedures*. The approach and procedures must be appropriate for addressing the stated purpose(s) and research question(s).

6) *Findings*. Findings must be presented and documented to show clear relationships to the purpose(s) and research question(s). Evidence needed to support conclusions must be clearly identified, including the presentation of statistics, charts, and graphs, use of quotations, observational data, references, and citations.

7) *Conclusions*. Conclusions and logical inferences should be pertinent, clearly drawn, and convincingly supported by evidence.

8) *Readability*. All manuscripts must be well-organized, well-written, and readable.

Book Reviews Book reviews are solicited by the Book Review editor. These reviews are not submitted for blind review but are reviewed and edited by the review editor. Decisions as to the books to be reviewed and who is asked to review them are also made by the Book Review editor. "Essay Reviews" of a series of books on selected topics are occasionally commissioned by the editors of *AEQ*. These essay reviews are not submitted for review but are handled by the editors themselves. If you have suggestions for books to be reviewed, or if you should like to review a book, contact: M. Carolyn Clark, Dept. of Education-HRD, 615 Harrington, Texas A&M University, College Station, Texas 77845; Tel: 409-845-4086.

Disposition of Manuscripts Submitted

We receive approximately 100 manuscripts per year. Over the tenure of our editorship, the average acceptance rates have varied between 20 and 30 percent. The content of manuscripts, as well as the authorship, reflect our commitment to diversity within the field of adult education and our intention to encourage more articles focused with an international perspective. Methodologically, we continue to accept and publish manuscripts that represent quantitative, qualitative, historical, and philosophical perspectives.

Reflections and Future Directions

While HRD topics have not appeared prominently in the various surveys of articles published in *AEQ*, the subject has nevertheless received attention within the pages of the journal. Examples of these include Karen Watkins' recent essay review on the definition of HRD and Blomberg's piece on cost-benefit analysis for training. This list might also include pieces which are less overtly HRD-specific but have had to do with adult education in workplace settings. Joyce Stalker's article on "Deconstructing the Myth" illustrates this kind of HRD related article. The introduction of *HRDQ* in the summer of 1990 as a publication outlet for researchers of HRD has probably siphoned off some undetermined portion of papers which formerly would have found a home in AEQ.

HRD researchers are invited and encouraged to submit their work for consideration in *AEQ*. Our position as editors (and hopefully speaking for our editorial board) is that articles are not considered primarily on their ideological persuasion but on their scholarship and contribution to research and theory in the field. The journal seeks top quality manuscripts whatever their political or ideological hue as long as they fall within the scope of the journal. There are too few scholars conducting rigorous research or advancing theory within our fields. While we do not disclaim the political or ideological contexts in which all research and theory are conducted, these positions should not be used to make decisions on the merit of the scholarship. Our journals should be the place for dialogue and discussion around these differences, not a context for censorship or exclusion.

Trends in Research Methodologies The ascendence of qualitative research within the academic community is influencing editors and publishers of scholarly education journals. Criteria arising from and driven by particular methodological or epistemological approaches are being increasingly called into question. Reviewers and editors alike search for "common ground" amid this growing climate of methodological relativism. For example, as they struggle to find a voice to express their work, postmodernist scholars often tax our review editors and ourselves with their often complex and difficult language. Research designs completely foreign to traditional research are emerging within the qualitative arena and stress our abilities to effectively assess their soundness. Authors struggle to find new ways of presenting findings that are more consistent with the epistemological frameworks within which the research was conducted. Similar to the traditional art critic years ago who wondered whether modernist paintings represented art, we look at these new articles and ask, "Is this scholarship?" What constitutes "good scholarship" within these newer approaches is a question that needs to find space within our journals and we as editors need to begin convening symposia to further the conversation.

In addition to the difficult questions being posed by the nature of this research, reporting it is creating some very practical problems for editors and publishers. The substance of qualitative research studies is often difficult to communicate within the page limits traditionally imposed by editorial policies. Publication of qualitative studies sometimes results in fewer articles per issue, as allowance is made for the expanded nature of these articles. We are being pressured by these scholars to find room in our journals for their work or they will take their marbles and go elsewhere. Many of these papers represent excellent pieces of scholarship and we as editors do not

want to lose them to other educational journals. But with the economic pressures that most journals are experiencing, how do we change to accommodate these newer form of research? One of the changes we at *AEQ* are considering is a move to a larger format. Traditionally, however, many scholar journals have been of a distinct size, often setting them off from other publications that are perceived to be more magazines than scholarly journals. Will moving to a larger format undermine the scholarly nature of our journals? We have several examples of serious publications that have shifted to this format. Again, however, this is an issue around which it would be helpful to generate discussion among editors, review boards, and readership.

Trends in Society Current trends within society are likely to influence the nature of the articles submitted to and considered for publication in *AEQ* and other journals dedicated to adult learning. Increasingly, emphasis in both policy and practice is being placed on the relationship of education and work. While education for work has always been a prominent aspect of the field of adult education, research and theory has largely focused on worker and labor education. Upheavals within labor and rapidly changing economic conditions in many countries throughout the world are likely to place more emphasis on this orientation, especially within adult populations. The challenge is to fully understand the complexity of these changes through careful research and theory and to avoid a narrowly focused vocational instrumentalism which is often reflected in the statements and documents of many policy-makers.

These changes are also creating demands for changes in the way higher education sees itself and does its business. We are being increasingly pressured to design educational programs and to conduct research which are more "relevant and meaningful" to the concerns of the "real world." Few of us would disagree that what we do should be relevant and meaningful to the needs of society. What is problematic, however, and should be a focus of our work as scholars, are the questions of who defines these needs, in whose interests are they being pursued, and what do we mean by relevant and meaningful. For those of us responsible for preparing professionals within our respective fields, these questions represent a potential area of scholarly endeavor and should be reflected in the pages of our journals. Examples of these areas of "need" which occupy current public debate are welfare reform and the increasing emphasis on punishment rather than rehabilitation of criminal offenders. Both areas involve education and training of adults as a central element in the debate. Yet one would be hard pressed to find sustained dialogue on these issues within our journals.

Conclusion

In the past, *The Journal of Adult Education* has been an outlet for articles related to the training and education of adults for business and the workplace. Its successor, *AEQ*, has continued this tradition, with an increased emphasis and focus on research and theory. While the differences between this journal and *HRDQ* may be blurred relative to education and training for the workplace, *AEQ* is increasingly serving as a forum for scholars who take a critical perspective to HRD. The journal, however, continues to encourage all forms of scholarship related to HRD and no scholar should feel that the intellectual climate of *AEQ* is somehow inappropriate for their work.

The future of publication in adult education and HRD faces a number of formidable challenges, both within the scholarly community and from quantum changes within society. Editors, reviewers, and the higher education community in general need to sustain conversation and dialogue around these issues, particularly within the pages of scholarly journals. This symposium marks a good beginning in that direction.

Reengineering The Organizational HRD Function: Two Case Studies

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This action research study set out to determine what kind of structure an HRD unit would need to support an organization wanting to be more responsive to changing conditions. The researcher worked simultaneously with task forces representing two different organizations, a Federal government department-level agency and a regional telecommunications company, which were charged with formulating a new operating structure for the HRD functions of their respective organizations.

There is widespread acknowledgment that organizational structures and work processes that are based on the traditional bureaucratic model are not flexible, adaptable, and creative enough to function effectively in these turbulent times. The same can be said for the traditional HRD function. Most HRD functions are still organized around a behavioristic *training* model that emphasizes classroom-based skill development. There is a need to explore a more organistic model that can respond to the constantly changing economic and social conditions that organizations face now and in the foreseeable future.

Carr and Kemmis (in Marsick, 1987) talked about the dominant paradigm in the field of teaching and learning to be related to the same mechanistic model as Weberian bureaucracy. Marsick (1987) maintains the same view for the field of HRD as it is practiced in most organizations. My assumption is that the structure of most HRD units in organizations also reflects this same paradigm.

To remain viable in a turbulent economy, successful organizations have adopted new strategies for the management and production of goods and services (Dertouzos, Lester, and Solow, 1989). There is a corresponding need for HRD functions to move from a reliance on the traditional role emphasizing the design and delivery of classroom training to reliance on an expanded organizational role emphasizing change management and learning systems within the organization.

Purpose What kind of structure would an HRD unit need to meet the requirements of organizations wanting to be more responsive to changing conditions.

1. What should be the operating mission of the HRD function
2. What should be the guiding philosophy, goals and objectives supporting the function
3. What should be the principle services provided by the HRD function
4. What should be the vehicles for the design and delivery of HRD services

Methodology This was a qualitative action research project where the researcher was an advisor/consultant to two different organizational task groups and met with both task groups throughout the conceptual design process. One organization was a department-level government agency and the other was a regional telecommunications company.

The U.S. Department of Education

> The training program at the U.S. Department of Education is outdated and inadequate. In this age of reinvention, streamlining, and increasing reliance on technology, this agency is in crisis. Employees at all levels are facing new duties and teamwork (will) become the norm . . . employees will need to be re-trained for new responsibilities and positions that will be created in the new organization (ETDI Team, p. 4).

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The U.S. Department of Education (DOE) was one of the few agencies to take President Clinton's call for reinventing government seriously. In 1994, DOE established the Reinvention Coordinating Council (RCC) to form and oversee the work of various task forces responsible for developing plans to reengineer operations of the agency. One of the task forces formed was the Employee Training and Development Improvement Team (the team). The RCC chartered the team to:

- undertake a review of the current employee development process
- benchmark and identify best practices
- develop a model practice
- make recommendations to the RCC on implementation and evaluation of the model

Also included in the charter was the challenge to "propose a visionary employee training and development system that enables employees to be the best they can be and (DOE) #1 among Federal Agencies" (EDTI, p. 4).

The Task Force The eleven members of the team each represented their respective sub-agencies. They were given time off their jobs and responsibilities to work on the task force and were given office space, equipment, administrative support, and a budget, as well. They were all very aware of the impact of group process and worked according to an agreed upon goal. They identified tasks necessary to accomplish the goal and developed an action plan.

Their first step was to gather information on the current status of training and development in DOE by interviewing both training staff members and executive level managers. They also surveyed employees as to their concerns and reviewed reports and other documents

They concluded that DOE's current program is:

- under-funded to achieve its current mission
- unable to respond fully to the true needs of the organization and its employees
- under-utilized by the department as the performance improvement resource it should be

In addition, they conducted a literature search on the current status of training and development in both the public and private sectors; as well as talked to trainers from other Federal agencies and representatives from professional associations to establish a basis for comparison.

Their next step was to benchmark public and private organizations to collect information on best practices. They developed benchmarking questionnaires that were designed for both telephone and on-site interviewing. The protocol included such questions as:

- What is the training or learning philosophy of your organization?
- What is the mission of your training/learning program?
- Who does your training - internal or external staff?
- What are the qualification and responsibilities of your internal staff?
- Who are the customers of your training/learning unit?
- What is the level, status and reporting authority of the director of the training/learning unit?
- Where is the training/learning unit located in your organization?
- How is your program funded and is it a profit or cost center?
- What types of learning opportunities are provided?

Members of the team visited six private organizations and contacted an additional two; they visited on Federal agency and contacted an additional five. They also purchased a benchmarking report prepared by a management consulting firm. The team then spent two months, sometimes in two or more day long marathon sessions, developing a model of a proposed training/learning program for the agency.

The Model The proposed program relies on four fundamental elements to transform DOE into a learning organization.

The mission The foundation for the model was the concept that DOE needed to become a learning organization in order to become a high performance workplace. DOE needed to value lifelong learning internally, as well as externally. Learning needed to be seen as ongoing for all employees; and all employees would be encouraged to be continuous, active learners and mentors.

The Change Agents The most significant change was the establishment of a corps of change agents (deltas) . The *deltas* would work directly with executive managers at headquarters

and in the regions to assist them in enhancing the performance of the organization and its employees. They would be the catalysts that drives the organization toward continued improvement. They would seek out and pursue actions to maximize organizational and individual performance through developing and securing learning and development opportunities best suited to the needs of their assigned clients. The reinvention team recommended that the deltas operate as a team under the oversight of an executive management committee. This would give them the freedom to manage themselves and coordinate services to their respective clients. Their primary skills would be in consultation, facilitation, diagnosis, and, of cause, change agentry. They would draw resources from The Performance and Learning Support Center (PALS Center) on an as needed basis.

The PALS Center This operation will provide customized learning and support services to drive continuous organizational and individual improvement through ongoing learning and change processes. The Center would be staffed with specialists with skills in:

- organization development
- training design and development
- management consulting
- technology
- employee development
- classroom instruction

There would be a center at headquarters and one in each region. They would serve as the primary forces for cultural change within DOE through their responsibility for strategic planning and communicating the mission and values of the organization. They would also be responsible for:

- consultation (primarily in support of the change agents)
- new employee orientation
- core competency training
- program-oriented training
- skill clinic
- career counseling
- policy infusion
- certification
- secondary and postsecondary learning support
- employee development
- external customer education support

The center would utilize program (line) staff as faculty for courses whenever appropriate while, at the same time, HRD specialists would act as mentors and coaches to program managers. The center would also develop and maintain evaluation, scheduling, and tracking systems. Finally, it was recommended that the center house a research function on innovative workplace learning strategies - The Institute for Workplace Learning.

Learning technology DOE needs to plan for the development of a learning technology infrastructure that delivers the right kind of training via the most cost-effective mechanism that meets the learner's requirements. One essential part of this infrastructure would be an *electronic performance support system* , technology that provides "just-in-time" information (and learning) through easily accessible computer terminals hooked into a network.

Other issues included in the team's deliberations included: funding considerations, staffing, and a recommended implementation plan. DOE has yet to fully implement the recommendations because of the ongoing budget impasse in Congress.

Bell Atlantic

In August, 1944, Bell Atlantic (BA) also assembled a task force to study what a "world class"

HRD function should look like. [1] They had gone through a similar process approximately two years before but were downsizing and believed they could reengineer a leaner and more effective HRD function.

The Task Force BA's task force consisted of nine people representing various specialty areas in HRD: diversity management, technical training, career development, leadership development, work/life strategies, quality, OD, and performance strategies. At the time, BA's HRD activities were somewhat scattered, both operationally and geographically. The team met for three weeks on an almost full time basis and, unlike the DOE team, relied totally on internal history and personal/professional knowledge. Whereas the DOE facility where the team met was equipped almost like a military command center, the BA team met in a typical conference room with flip charts and an overhead projector as their only equipment. They first went through a series of brainstorming exercises to form a picture of their current situation, since they all came together having only their own particular perspective based on their specialties and geographic locations. They examined:

- same/different - what was the same and what was different about each of their operations.
- good/bad news scenarios - what was good and bad about the HRD function.
- core competencies needed to support the good news scenario.
- the employee life cycle - at what points in an employee's life at BA do they come in contact with HRD
- what do customers, employees, significant others, potential employees, shareholders, supervisors & managers, legal representatives, unions, vendors, the HRD leadership, and the task force team *care about*. (They also prioritized this list after brainstorming each separately.)

They then brainstormed the ideal future HRD team (function) under three headings; organization development, training & development/performance enhancement, and career development/life planning/continuing education.

The Model The mission and structure are also key elements of BA's reengineered HRD function.

The mission The team developed a mission statement based on the concept of *learning partnerships* , the link between HRD and their clients, the operations (line) functions. The mission was to create learning partnerships which:

- Align learning interventions with BA's values and strategies
- Influence change at an individual, team, and systems level
- Provide and give access to knowledge and skill development to create learning for continuous learning
- Provide assistance to create learning infrastructures
- Help the client to define performance excellence in measurable terms
- Help build performance systems which reward learning or cause it to occur
- Model the learning culture

This learning culture also called for a major change in the values of the organization, incduding;

- learning is a strategic initiative and strategically focused
- learning interventions acknowledge the whole person
- reskilling/retooling happens all the time for everyone
- people do not need permission to learn
- commitment/acceptance by end users to a learning culture
- individuals are adaptive to change/receptive to learning
- very high learning goals; always challenging what we think we know
- everybody chooses to be part of the learning culture
- you never arrive!

The structure The core of the structure are project teams that provide the linkage between HRD and the client system. The project teams consist of professionals with backgrounds in OD

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[1] The source for all the information on Bell Atlantic came from the researcher's informal notes and untitled company documents, such as transparencies.

and project management skills that are responsible for initial diagnosis. These teams also contain resources for designing, developing, and delivering learning interventions. There is also a separate group that provides logistical and administrative support to all the project teams. The project teams are ultimately responsible for transferring expertise to the client system through a combination of process and expert consultation. The emphasis is that learning should be the responsibility of the work site as much as possible.

The one major issue that needed resolution was how to sell this model to a top management who were used to the traditional approach to training. BA has implemented the model and resolved their dilemma by emphasizing the performance enhancement perspective with management while relying on the project teams to build the learning culture. Their final mission statement reads:

> To create a new organization structure that integrates Leadership Development, Performance Enhancement, Continuous Learning, Organization Development, Career Services, Continuing Education, Diversity, and Work life into an effective performance consulting organization which provides a single corporate focus and 'world class' resource for individual, team, and organization development (transparency).

Conclusions

It was not the researcher's influence nor was it coincidence that both task forces chose models that are similar. It should be noted that the researcher acted more as a resource and facilitator than as an advocate, and in both cases the structure emerged from the group. In fact, the researcher was not present at the time the DOE task force developed their model. Both models have three key ingredients that are critical to their potential effectiveness; internal change agents linking directly with clients, a consulting approach to learning interventions, and learning as part of the organization culture.

Change Agents Both task forces recognized the need for HRD to be able to link directly with the line units in order to facilitate change in the organization. In DOE, it would be an individual actually residing in the line unit but reporting to a change agent team; in BA it would be project teams that are responsible for various line units. In both cases the change agents are responsible for ongoing communication and initial diagnosis. Beckhard (1969) defined change agent as one whose primary responsibility is to ". . . facilitate the improvement of organization effectiveness and health through providing interventions, development activities, and programs for organization improvement". (p. 20) I believe this definition has stood the test of time. At BA, the project teams contain design and development capability - they would be able to conceivably provide interventions, development activities, and programs on their own.

Both task forces also realized that change in the organizational culture needed to be supported from the top and practiced in the operational units. Having change agents aligned with the line units allows for direct influence on the line managers. Day-to-day informal communications would have more of an impact on staff than just sending them off to training periodically.

Consulting Approach Burke (1994) identified five elements in his generic model for organizational change:

- an (outside) consultant
- gathering of information from the client for purposes of understanding the nature of the problem or issue and reporting this information back to the client so appropriate action can be taken
- collaborative planning between the consultant and the client system for purposes of change
- implementation of the planned change
- institutionalization of the change

This also describes the process both change agent groups would pursue in consulting with their client systems; a mixture of both process and expert consulting, as described by Schein (1987).

The goal would be to use the consulting process to link learning interventions with the line units' strategic goals to ensure that HRD services add value to the client (McIntosh, Page, and Hall, 1993). In both cases the internal consultants can obtain resources from other parts of HRD, as well as from outside the organization, if needed. This change agent/consulting approach allows HRD to provide learning on a *just- in-time, on-the-work-site* basis that is critical to support productivity and effectiveness.

Learning and Culture When Sun Microsystems went through a reengineering of their HRD operations, two of the major reasons was to maintain the competence of knowledge workers and develop a learning organization (Smith, 1994). The learning organization concept may be considered a fad, but it is very real to an increasing number of organizations who believe that performance improvement and organizational effectiveness are not going to happen without a commitment to learning being a part of the organizational culture. Both task forces realized that learning had to be at the very heart of the models they developed, and that a technological infrastructure was required that supported systematic learning (along with both traditional and informal training techniques). DOE included a very strong recommendation for technological systems that would provide immediate access to information and tutoring (BA already had the technological capability). Both task forces also made learning a centerpiece of their mission statements, which became a method of educating management when presenting their recommendations.

Both of these organizations reengineered HRD functions that would be able to be responsive, flexible, and progressive. Of cause, only time will tell if they are truly effective, but both models represent a commitment on the part of HRD professionals to find the best way to organizational effectiveness.

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Emerging Trends in HRD and OD Based on Organization Assessments

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Identifying trends in HRD is typically done using surveys. This qualitative study provides evidence of trends based on organization-wide assessments which rely on the words of workers and potential learners. Findings reveal management, communication, and training as the key areas of need. Further analysis shows that teaching managers to lead by example, helping organizations develop effective two-way communication systems, and technical skills training are key areas for the field to focus on in the future.

Rarely do researchers have the opportunity to explore issues and trends in multiple organizations other than through surveys which frequently yield decontextualized results. This study used a unique source of information gathered from an original organization assessment process devised by staff and consultants working with The Center for Continuous Improvement at Athens Area Technical Institute, Athens, Georgia. The data base is unique because, unlike survey data which asks the respondents to rate or respond to set questions or situations, this data is gathered through an interactive process that reveals the voice of the workers. The purpose of the study was to conduct a cross-case analysis of seven organization -wide assessments to discover significant trends or issues with relevance to the field of HRD.

The assessment data included in the study were gathered at seven companies in Georgia who participated in organization-wide assessments in the past two years. The companies include Alcan Rolled Products, Coats and Clark, Edison Plastics, Fowler Products, Georgia Pacific - Panelboard, J. M. Huber-Oriented Strand Board, and NORAMCO. They range in size from approximately 80 personnel at Fowler Products to over 300 at Coats and Clark. Two are not American owned, Alcan is a Canadian company and Coats and Clark is a British-owned company. All companies, except for J. M. Huber, Inc., are members of the Center for Continuous Improvement.

The Population

These seven organizations have diverse missions and products except for Georgia Pacific-Panelboard and J. M. Huber-Oriented Strand Board which both produce wood products for the home construction market. One company, Fowler Products, is a locally owned partnership which designs and produces high-speed capping equipment. At Fowler the "corporate" leaders co-exist with the plant. In every other case the corporate structure is elsewhere. The other products manufactured by these companies include bulk pharmaceuticals made by NORAMCO, resilient plastic film from Edison Plastics, sewing thread from Coats and Clark and 60,000 pound ingots from recycled aluminum from Alcan.

In spite of the diversity of products, the researchers became aware that the organization-wide assessments seemed to be yielding recurring themes and trends. All seven of the organizations are dealing with machine technology that is rapidly advancing in complexity and automation. In every instance management has a mandate to "do more with less" creating the dilemma that Kleiner (1995) describes as choosing between Demingism or Hammerism. Yet both Quality efforts and Reengineering efforts adopted in the past by many of the organizations in this study have failed to yield significant results. Kleiner (1995) notes that they fail because they omit "{trying} to understand...the organizational culture that drives the flow of work, including the attitudes, situations,

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and frustrations that go unspoken in the average workday" (pp. 170-171).

Without exception, these companies face radical change in the coming two to three years but are not resourced extensively with corporate funds to address the needs of workers in dealing with the changes. Each site manager is committed to survival strategies that depend upon managers and hourly workers alike continuing to learn new ways to do their jobs. They believe that in order to meet the challenges of the future, all levels will be a part of problem-solving and decision-making in a blend of tasks, both in the front office and on the shop floor. Indeed, this has been the motivation for them to join the Center for Continuous Improvement or to contract for services there.

To uncover the roadblocks that Kleiner (1995) calls "legacy systems" the Center takes 100% of the personnel in an organization and engages them, segregated by structural levels, in an interactive analysis of changes expected, workculture needed to survive change, themes that suggest elements of change, and a ranking of themes for strategic action.

The Process

The process is clearly one reflecting the belief that "from involvement comes information, from information comes knowledge, from knowledge comes understanding, from understanding comes commitment, and from commitment comes consistent and efficient execution of the plan" (Brassard, 1995, p. 64). This highly interactive process is outlined in detail in a case study published by the authors in *In Action: Conducting Needs Assessment* edited by Phillips and Holton (1994).

In brief, the assessment process for a group of no more than 20 requires four steps:

1. A facilitator asks the participants, "What changes do you expect in the next three years regarding this company's market, competition, customer demands, products, technology, organization and cost of doing business?" A structured brainstorming process including all participants as a large group is used to elicit answers from the participants. Answers are recorded by the facilitator on flip chart paper and all answers remain visible to the group at all times.
2. A second round of structured brainstorming is conducted by participants in small groups as they respond to the statement "Given the magnitude of these changes, what sort of workculture would it take to survive this change and remain competitive?" Each participant is asked to generate at least 10 ideas on 3x5 index cards.
3. The third step, affinity mapping, requires that the group spread out all of the index cards and silently sort the mass of cards into 5-7 "piles" of related cards. The group then chooses a label to identify each pile or "affinity".
4. The fourth step of the process requires that the entire group engage in a root cause analysis of the five to seven affinities that were identified in step 3. The group compares each affinity to every other one and asks "Which affinity drives or causes the other?" All members of the group participate in this discussion which frequently generates lively debate. The facilitator draws a line from one affinity to the other if the group agrees that there is a relationship between the two. The group then decides which one is the cause and which is the effect. The facilitator then draws an arrow pointing towards the effect. The affinities with the most arrows drawn toward others ares the priority affinities and must be addressed first in any effective strategy for change. The affinities with the most arrows coming into them will probably need little or no strategy since they will improve as a natural result if the others are treated first.

When an entire organization participates in this process, clear patterns for the current state emerge; management and hourly then have a shared sense of direction for developing a change strategy. Together they have identified the same driving issues, helping management to avoid the common pitfalls of building a strategy which merely (over)reacts to symptoms. This assessment process is only the first, but critically important, step in a strategic planning process which empowers an organization to define its own future using all of the talents and skills of the workforce. In addition, a comprehensive training strategy can be developed based on the expressed needs of the workforce and the needs of the marketplace.

Methodology

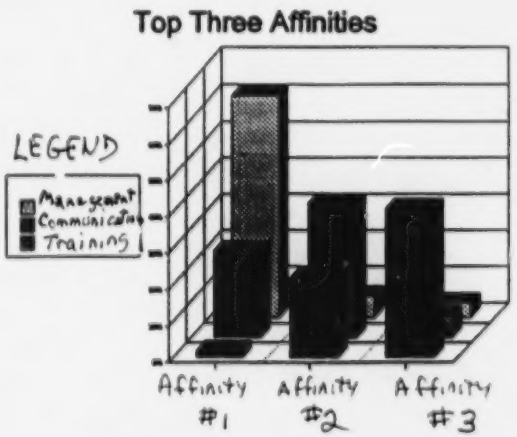
The data set consisted of index cards that participants wrote in response to the question "In your opinion, given the magnitude of the changes that you predict over the next 2-3 years, what sort of workculture would it take to survive the change and remain competitive?" Those cards were clustered by participants into like affinities and were renamed based on consensus of the group. Affinity groups were later typed in list format. These index cards would be considered *personal documents* according to Bogden and Bicklen (1982) "The criterion for calling written material personal documents is that it is self-revealing of a person's view of experiences (p. 97).

To extract meaningful insights from such diverse manufacturers, a cross-case review of the top three affinities, or root causes, in each organization revealed that three categories accounted for 68% of the possible top three affinities. Each of these three categories, Management, Communication, and Training were then analyzed further to reveal more specific trends. A "systematic content analysis" (Goetz & LeCompte, 1984) was conducted which revealed five sub-categories in management, four in communication, and five in training. The sub-categories emerged from the data quite easily based on how often they were mentioned by participants. Guba and Lincoln (1981) note that "the number of people who mention something or the frequency with which something arises in the data indicates and important dimension" (p.95). These sub-categories became what Merriam (1988) calls "conceptual categories...that interpret the data for the reader" (p.133).

After creating the sub-categories, the index cards were reviewed and divided into their appropriate sub-category. The number of responses for each category were then tabulated for each interactive session used in the study. Based on this information descriptive statistics were used to reveal trends in the data set.

Findings

This research revealed three key areas of challenge for these organizations as they create the kind of workculture needed to remain competitive. Of the top three, or causal, affinities the three areas are "Management," "Communication" and "Training."



Management Perhaps not surprisingly, the affinity ranked as *the* most influencing was "Management" and its variations. 61% of the time, or 30 out of 49 cases, this affinity represents almost two-thirds of the top affinities. This means that over and over again groups identified "Management" as the challenges associated with developing an organization to remain viable and effective. "Management" appears to be the driving factor for the organizations participating in this study and their ability to deal with the future changes.

It is important to note that it was not only workers who felt that "Management" was the number one affinity. In five out of seven of the management groups, the number one affinity was "Management" or a variation. Thus management was provided a moment of breakthrough thinking and reflection on their own practice with regards to where any developmental strategy must start - with themselves. It should be noted that typically management's intentions prior to participating in this assessment process was to focus on special projects or skill training for others - usually the workers who report to them.

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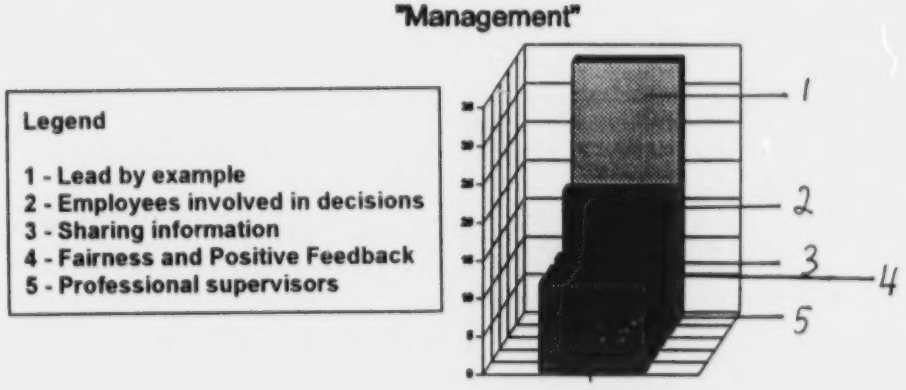
Hourly workers, when presented with the results of the assessment, were consistently surprised that their management had also ranked "Management" as the number one affinity. These workers were typically convinced that far from regarding themselves as a starting point for change, their managers would instead create a label for their number one affinity as "Better Employees" or "Better Teams" or "Better Attitudes of Workers." This too provided a moment of breakthrough thinking and mutual understanding for the workers. They realized that management did not necessarily believe that all of the change should come at the worker-bee level, but that frequently change must begin at the leadership level.

The following sub-categories, which emerged from the data, help to better understand how people defined "Management" as a means of achieving the desired workculture:

Managers are leading by example, showing respect for employees, trusting workers, and being honest **(34%)**
Employees are involved in the decision making process, employees have input into operations, better follow through on employee ideas and suggestions **(18.9%)**
Information is being shared, management listening more, better communication between management and employees **(11.6%)**
Managers are ensuring fairness in policies and are giving positive feedback, supervisors expecting the same job from everyone, management letting employees know that they appreciate it when workers do a good job **(11.6%)**
Immediate supervisors are professionals, supervisors know problem solving tools, supervisors know the operation well, supervisors understand their role **(11.6%)**.



Communication "Communication" and its variations were much less likely to be the number one affinity, but was the number one or two affinity 30 out of 49 cases or 61% of the time. This places it second in having the most influence in success for surviving expected change. When groups identified "Communication" as a driving affinity they expressed a desire to be kept informed and to have their opinions and ideas validated. They often pointed to the need for improved communication systems or methods of sharing information.

It should be noted that many of these organizations lack even simple communication systems that are effective such and easy to read or updated bulletin boards. Some of the participating organizations have elaborate newsletters that the employees often considered irrelevant because the news was old or superficial. In general, employees want to be kept informed about the business and their own progress.

The data reveled a high level of agreement on what "Communication" meant to the participants, with the first two sub-categories representing 73% of all "Communication" responses. The following sub-categories of meaning help to understand how people were defining "Communication" as a means of

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achieving the desired workculture:

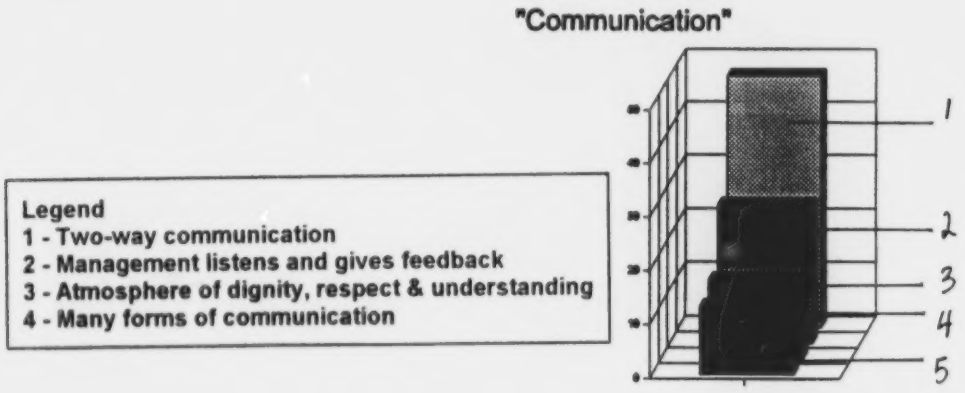
Two-way communication exists between management and hourly, sharing information in a timely manner, better communication between all levels **(47%)**

Management listening and giving feedback, giving positive feedback, management following up on problems, making better use of information **(25.7%)**

People communicating in an atmosphere of dignity, respect, and understanding, attitude, we are not competing internally, more shared responsibility and ideas **(14.6%)**

Many forms of effective communication are present, more communication, communicating is a priority **(12.6%).**

The fact that some of the "Communication" sub-categories support and mirror the sub-categories in the "Management" affinity serves to reinforce the significance of these findings. Of obvious significance is the clear cry for two-way communication as well as the need to be listened to and to receive feedback.



Training "Training" and its variations was the number one affinity only once, but, showing up 20 out of 49 possibilities, still accounted for 21% of the top three affinities. It thus ranked third in influence in success for surviving expected change. As the third ranked affinity, "Training" becomes a vital key to future success for these organizations as they plan strategy and navigate change in the near future.

The following sub-categories of meaning help better understand how people were defining "Training" as a means of achieving the desired workculture:

People are current in technical skills, more computer skills, more knowledge of machines, new skills training **(34%)**

People are cross-trained and can flexibly carry out multiple tasks, hiring skilled personnel, more cooperation between shifts **(25%)**

Training opportunities are plentiful, more training, more knowledge and skills, increased knowledge, better training **(25%)**

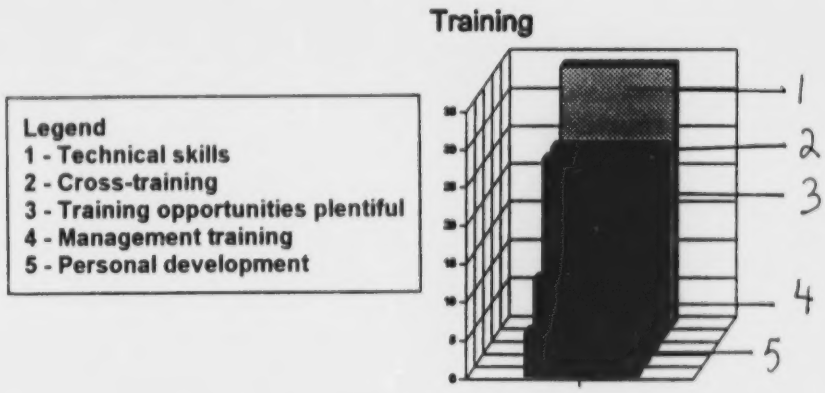
Management training is important, supervisors know how to lead employees, more technical training for supervisors **(11%)**

Personal development training is valuable, change in attitude throughout the plant, more pride, hourly employees are confident **(5.7%)**.

Observations here include that while "Management" may be the number one affinity associated with success in surviving change, clearly, with only 11% of the "Training" theme, people do not predict that it will be through training that managers will find their way. Another observation is that workers have substantial anxiety about becoming obsolete in their technical skills. The high percentage of entries relating to cross-training could stem from management's attempt to move toward self-directed work teams

(a strong movement in manufacturing) or it could stem from workers who increasingly see the value in learning one another's skills as a personal strategy for remaining on the payroll in times of change and uncertainty

In any case, training for the sake of training or putting a disproportionate emphasis on personal development will probably prove to be deceptive strategies. Our findings indicate that training must have strategic content, that is, it must be clearly related in the eyes of trainees to an improved ability to compete, if it is to play a role in successfully surviving change.



The single most important benefit cited by people in the sessions when the results of the organization-wide assessment were shared was how startling it was to find such *agreement* on where to start in planning for change. The fact that there is great variation in the bottom three or four affinities (not addressed in this study) only points up the sense that any number of world class, high-performing goals can be accomplished to shore up an company against the storms of change if the top three issues are resolved first or in order of influence.

The authors would like to thank the employees and managers of the companies involved in the study for their trust and honesty; Joe Crosland, a senior consultant with the Center for Continuous Improvement, for numerous upgrades to the process; and George Dougherty, Jr. for his assistance with the data analysis.

Implications for HRD

The field of HRD is broad and complex. Students and professors alike could be overwhelmed by ASTD's competency list. The findings from this study are important to the field of HRD because they help us to focus our attention and resources in critical areas of need identified by representatives of the population that many HRD professionals serve - managers and line workers.

In the area of management development we need to pay particular attention to helping managers practice what they preach, or "lead by example." Managers need help in discerning how they are contradicting their theoretical knowledge in practice. This calls into question the traditional approach to management development, the seminar format. Can we really facilitate leadership by example in a classroom? Or would observations and executive coaching be more effective?

Findings also indicate that HRD professionals will need to be prepared to help managers facilitate effective problem solving sessions with employees. This demands that HRD professionals be familiar with the multitude of problem solving techniques and be prepared to teach them to managers. In addition, HRD professionals will also be valuable when they can teach managers to effectively facilitate problem solving meetings.

The findings in the area of communication indicate a need for HRD professionals to understand communication from a systems perspective. In today's and tomorrow's organizations effective communication will be even more critical. The traditional methods of communicating with workers -

formal newsletters, pay check stuffers, boring meetings where management does all of the talking - are dismal failures. HRD professionals will need to be able to facilitate the analysis of current communication systems and their breakdowns and the creation of effective communication systems.

Seminars in listening skills and giving effective feedback have been plentiful and many of the managers and supervisors in our study have attended such seminars. However, there still seems to be a great void in this area. This finding calls forth the question - What is the best way to teach listening and feedback skills? Do we need a paradigm shift in this area?

The field of Training has shifted from an early emphasis in the 1940's and 50's on safety and technical concerns to more emphasis since the 1960's on interpersonal and computer skills. The findings from this study indicate that the workers are very aware of their need for technical skills. They want highly contextualized and pertinent training. They want to learn how to operate new equipment, including computers, in the context of their jobs - not in a classroom. They need to be able to apply what they learn almost immediately.

This need calls into question the role of the HRD professional as a trainer/facilitator. Is it feasible to think that one person or team in an organization - the Training Department - could do all of this technical training? A more likely scenario is the trend that we see emerging of team coaches and managers as trainers. If this trend continues, it will require that HRD professionals be proficient at training others to train rather than simply knowing how to train.

In addition to helping managers and team coaches become proficient as teachers and trainers, the findings from this study regarding cross-training indicate that ultimately everyone in these organizations will need at least a basic understanding of effective training techniques. Current approaches to cross-training in most organizations are potentially dangerous because there is little or no understanding on the part of the worker regarding what constitutes effective teaching and learning. Many workers believe that one round of "show and tell" should be sufficient, and they are quite upset with whomever they are cross-training if they fail to understand or retain the new information or skill. The vision of organizations in which everyone is an effective teacher and learner presents an awesome challenge to the field of HRD.

The questions raised by the findings of this study regarding the current focus and methodologies of our field are not easy questions to consider and reflect on. Many of the implications will require that we reconceptualize our current models and paradigms. HRD professionals at all levels are aware of how important it is for them to add value to the bottom line of the organizations they work in or with. To the extent that we are able to meet the challenges presented by the trends identified in this study, we will become invaluable to organizations as partners in creating a workculture. To the extent that we refuse to shift our own paradigms, we will probably become as obsolete as the autocratic plant manager or the "do my eight and hit the gate" worker.

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The Emergence of a New Paradigm: Spirituality and Work

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University of Minnesota

Reflecting a more holistic approach to work, workers are no longer content to "work for a living" and are bringing their needs of belonging, meaning, and purpose to work This paper explores the reasons for this change, the responses of work organizations to the change, and the implications of the idea that "we live to work."

A review of the literature of the last decade demonstrates that a paradigm that has been in operation since the Industrial Revolution - that the goal of work and the worker is the production and consumption of goods and services - has undergone scrutiny and evaluation. Workers are no longer passive to the nature and demands of work as they have been in the past and a paradigm shift around work is beginning.

Part of this paradigm shift is the increasing call for an integration of work and spirituality. Drawing upon a broad continuum of literature from popular to scholarly business publications, and popular books written by psychiatrists to scholarly works authored by theologians, the literature describes the increasing dissatisfaction with the accepted paradigm and reflects the element of spirituality entering the realm of work. The March 1995 cover story of *Industry Week* on the book *Jesus, CEO* by Laurie Beth Jones elicited more reader response than any other article in the magazine's recent history. The *Journal of Business Ethics* published an article entitled, "The Buddhist Perspective on Business Ethics: Experiential Exercises for Exploration and Practice" in January 1995 and *The Reinvention of Work* by Matthew Fox, a theologian, discusses how to must pay attention to one's attitude towards work as well as to the environment in which that work is accomplished.

Organizational psychologist Richard McKnight (1984) writes that people have needs in the "areas of body, mind, and spirit. Yet most companies, if they acknowledge that people have needs at all, act as if there are only two requirements for producing good work: money and job security" (p. 142). McKnight suggests that enlightened executives "are beginning to understand that there is much more to performance" (p. 142); John Brandt writes that diverse religious traditions share the belief that work "is not separate from the hours that precede and follow it, but is a part of a larger whole" (1995, p. 3).

When we ignore the spiritual values at work, we inhibit the best in people. Spiritual can be defined as "(1) 'the animating or life-giving principle within a human being,' (2) 'the part of a human being associated with the mind or feelings as distinguished from the physical body,' and (3) 'the real sense of significance of something'" (George, 1993, p. 3D). Spirituality represents the need that humans have for something larger than the self in which to believe. Spirituality encompasses religion but goes beyond it; whereas the latter refers to a set of beliefs, doctrine, and rituals, spirituality is the "more general need for which religious practices are a vehicle" (McKnight, 1994, p. 147).

In this paper, I explore a more spiritual conception of the meaning and role of work in the life of workers. The role of work will be briefly discussed and the development of management theory and its impact on work is reviewed. The new emerging paradigm shift in work and its implications for work and spirituality will be examined along with work organizations that are already implementing changes. Finally, implications for the field of human resource development are considered.

Ketchum and Trist (1992) believe that while there are serious performance and behavior problems of workers which inhibit productivity, there "is a mismatch between the characteristics of people and the organizational characteristics of workplaces" (p. 7). Historically, organizations have tried to influence or replace workers; Ketchum and Trist maintain that changing the ways in which workers experience work is the key. The predominant model of business as an economic institution, concerned only with profit and performance, is inadequate. Edward E. Lawler, professor at the Business School of the University of Southern California, states, "The traditional business model has failed and we're looking for a replacement" (Lee and Zemke, 1993, p. 28).

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That replacement needs to be found not only for the institution of business but for many other components of our culture as well. It is a tenant of the present discussion that the paradigm initiated with the scientific revolution - that knowledge is found objective evidence gained through scientific methods and the world is composed in individual parts- is being replaced with a new emerging paradigm - that emotions, intuition, and spirit bring knowledge and the world is characterized by wholeness and connection. This emerging paradigm is intrinsically related to how spirituality and work will become integrated.

Peters and Waterman (1982) found that workers perform most creatively and energetically when they believe that they are contributing to a cause or a purpose beyond their own personal interests. One should not think that the crisis in work today is just about jobs: it is not. It is a symptom of something much deeper: a crisis in our relationship to work and the challenge to create it anew.

The Identity, Purpose, and Role of Work

Many workers are greatly concerned about having work to do, especially in the current realm of relatively high unemployment, downward mobility, unforeseen shifts in the job market, and economic uncertainty. They want to work, and much time, money, and effort are spent to obtain marketable skills that will result in work.

It is interesting, given the level of concern about work, is that we often do not reflect on work itself - its nature, history, present shape, and proper place within our lives. For those employed full time, approximately half of our adult waking lives will be spent at work. What is the final point of this time and energy?

Obviously, we work to make a living; but is that all there is? Is work in itself a good thing for human beings? Does it fill our lives with meaning, direction, and purpose? Does it offer the occasion for accomplishment, satisfaction, and self-fulfillment? Or it is a necessary evil? Should we resign ourselves to the philosophy that "work is called 'work' for a reason?"

The purpose of work in our lives is central to any discussion of spirituality and the workplace. As noted previously, workers perform best when they have a cause (Peters and Waterman, 1982). Yankelovich (1982) reports that a majority of Americans workers admit to working less hard at their jobs today than ten years ago, even though larger aspects of their jobs are under their own personal control. Most workers felt that while it was morally important to work hard, someone else benefited economically from their effort.

Yet research (Smelser & Erikson, 1980; Simpson & Simpson, 1995) indicates that unemployment is psychologically devastating to workers, causing despair and self-loathing. Through work we gain a sense of belonging. Work as an institution bring people together; it organizes life and gives each day a focus. A nationwide survey of a cross section of Americans found that although the vast number surveyed found work as necessary, done for the sake of money and in itself not enjoyable, over three-fourths would continue to work even if they were to receive sufficient money to live comfortably the rest of their lives (Kahn, 1974).

Today most work is accomplished through social institutions and is shaped by a variety of social and historical forces: technological change, government policy, international trade, labor markets, and other factors. The majority of workers are now employees and work is organized and directed by managers who organize work in a certain way, often according to certain assumptions about what makes humans work and their work productive.

Often workers do not find that any significant talents or abilities are being utilized in their work responsibilities nor do they believe that their work is of significant value to society. Their work is just a job, a means to earn money. As Jacques Ellul (1976) writes in The Ethics of Freedom, "Our age is characterized by non-meaning. All psycho-sociologists agree ultimately that the work we do is marked by this fault...It has no obvious value of its own" (p. 461).

Ellul maintains that there is little that workers can do to change the state of work in society. But work is a product of the culture which surrounds it and as a review of the historical attitudes towards work would demonstrate (Brief and Nord, 1990), the meaning and role of work in culture does change. What is an appropriate design of human work? This writer holds to the normative idea that work ought to be a social place structured so that it is possible for workers to serve others through the use of their gifts, talents, and abilities. Pope John XXIII (1976) wrote,

> Justice is to be observed not merely in the distribution of wealth, but also in regard to the conditions under which men engage in productive activity. There is, in fact, an innate need of human nature requiring that men engaged in productive activity have an opportunity to assume responsibility and to perfect themselves by their efforts. Consequently, if the organization and structure of economic life be such that human dignity of workers is compromised, or their sense of responsibility is weakened, or their freedom of action is removed, then we judge such an economic order to be unjust, even though it produces a vast amount of goods, whose distribution conforms to the norms of justice and equity (p. 161).

This philosophy is not widely maintained in the institutions of work. One of the earliest and most influential forces in management practices was characterized by the attempt to make human work productive by eliminating the employees' responsibility for their own work and concentrating it in the managerial elite. We turn now to a brief review of management theory from the late nineteenth century to the present.

Management Theory and Its Influence on Work

The mid- to late-nineteenth century was a period of great change in the U.S. economy as the Industrial Revolution began in this country. Manufacturing moved from the local small shop to centralized industrial production as machines replaced hand tools, mass-produced goods replaced handicrafts and factory workers replaced artisans. The shift to the industrial economy created a tension between the new demands of the industrial organization of work and the workers who had formerly been artisans. Compounding the tension were immigrants, arriving from rural lands with small shops and little understanding of the language.

Frederick W. Taylor In the late nineteenth century, Frederick Taylor developed and instituted scientific management in industry, replacing the individual work style of the worker with standardized working methods, increasing efficiency. Workers who had previously planned and accomplished the work lost power, authority, and the responsibility of decision-making to management. Workers were made passive and dependent on management. By the 1920's, Taylorism became accepted as the most rational and efficient way to organize human labor.

Mayo and the Human Dimension of Work From the Hawthorne Experiment, Elton Mayo developed the awareness of the role that psychological and social components played in work and productivity. The behavioral sciences begin to be considered in the relationship between work and workers.

Argyris: Human Behavior and Organization Chris Argyris, in *Personality and Organization* (1957), discusses the conflict between the formal structure of organizations which renders workers dependent and passive, and the psychological needs of workers for autonomy, long-term interests, and need for control.

Organizations can resolve the conflict between psychologically healthy individuals and the structure of formal organizations by changing the structure of jobs such that workers' psychological growth can be met through job enrichment and participatory leadership.

Herzberg: Human Needs and Hygiene Herzberg's (1966) research on human needs, motivation, and hygiene in the 1950's found that traditional management had focused almost exclusively on hygienic factors, failing to increase job satisfaction. Jobs must be redesigned to allow for achievement, recognition, and responsibility as well as provide opportunities for creativity and growth.

Both Argyris and Herzberg argued that enriched jobs would lead to both higher productivity and worker fulfillment. Properly designed, work can be of intrinsic value to the worker.

Drucker and Management by Objective Peter Drucker (1973) further developed the understanding of the worker. Critiquing the replacement of economic control with subtle psychological manipulation of manager over workers, he discussed the need for respect of other persons. His management by objective approach enabled workers to be involved in the design of their own jobs as they are the expert in the matter. The task of management is to provide workers with what they need in order to perform their tasks effectively.

This review of management theory traces the change in perspective on worker-as-machine to be regulated and tuned to worker-as-colleague to be valued and empowered.

A Reinvention of Work: The Emergence of a New Paradigm

The last fifty years of industrialization and work has created wealth and success in the Western world. Why is there a call for a redesign of the existing system, such that spirituality can be integrated into the structure?

Consultant John Adams (1984) notes that a new paradigm is emerging in which change must be examined at the organizational level and the global level.

> This new paradigm emphasizes...an expanded sense of personal identity and an awareness of the interconnectedness of people in their organizational cultures, and of organizational cultures to each other in the larger environment. Scientists at the leading edge of every discipline are making discoveries, and putting forth theories which are dovetailing with several views of evolution, spirituality, and integrated consciousness which have been put forth over the centuries....Our basic style of thinking is moving away from a Cartesian, reductionist/mechanistic base to include more expansionist and systemic thinking....These ideas have a great deal of applicability to the organizations we work in, and these organizations must provide the vehicle for personal and global transformations ...technological advances and a spiritual reawakening are fostering a growing sense of a global community and the awareness that we have become the creators of our own future (my underline) (pp. vi-vii).

In contrast, consultant Tom Peters writes, "But in tapping the needed imagination and curiosity [of workers], let's leave the Bible, the Koran and facile talk of spiritual leaders at home" (1993, p. 2D)

Clearly these two professionals are in disagreement; the latter denies the importance of a phenomenon the former views as intrinsic for personal and societal growth. A consideration of paradigm shift to which Adams refers will discuss this phenomenon of spirituality.

Copernican Revolution and Quantum Mechanics The last great paradigm shift was the scientific revolution which was based on "objective" knowledge developed from methods such as experimentation and controlled observation. Truth exists outside the individual and relies on this knowledge and the human senses. The outlook of "I'll believe it when I see it" was common (Ray, 1993, p. 4). But at the beginning of this century, the understanding of science began to change, primarily with the discoveries of quantum mechanics in physics. Subsequent findings in disciplines such as chemistry, biology, ecology, psychology, and further findings in physics resulted in new perspectives; one of the primary developments was a systems approach, which looks at the world in terms of relationships and integration. The universe could no longer be viewed as a mechanical system composed of elementary building blocks or the body viewed only as a machine.

Such scientific discoveries demonstrate that the world is an integrated whole rather than a dissociated collection of parts (Capra, 1993, p. 232). Systems are integrated wholes whose properties cannot be reduced to those of smaller units. The paradigm that is emerging includes this systemic approach as well as the understanding that "consciousness is causal, that the inner experiences of individuals, including intuition, emotions, creativity, and spirit, are vastly more important than the world of senses alone" (Ray, 1993, pp. 3-4). Stating that leading scientists cite inner experience or consciousness as a "central test of reality" (p. 4), Ray quotes Nobel laureate and neuroscientist Roger Sperry who writes that he rejects the view "that science has absolutely no need for recourse to conscious mental or spiritual forces" (p. 4). Now the appropriate outlook has evolved into "I'll see it when I believe it" (p. 4).

The "Ecological" View and Spirituality Thus, the predominate world view is moving from trusting only objective evidence and human senses to an emerging world view of trust of human consciousness, inner wisdom, and inner authority. Internationally known physicist and systems theorist Fritjof Capra (1993) writes that the new paradigm may be referred to as "deep ecology" (p. 232) which sees the world as interdependent and interconnected. All living things have intrinsic value and humans are one valuable creature of many in nature "Shallow ecology" (p. 232) is represented by the Copernicum paradigm; it is anthropocentric and nature is valued only for its use to humans. Capra writes,

> Ultimately, deep ecological awareness is spiritual, or religious awareness. When the concept of the human spirit is understood as the mode of consciousness in which the individual feels connected to the cosmos as a whole, it become clear that ecological awareness is spiritual in its deepest sense. It is...not surprising that the emerging new vision of reality, based on deep ecological awareness, is consistent with the so-called 'perennial philosophy' of spiritual traditions, the spirituality of Christian mystics or with the philosophy...underlying the Native American traditions" (p. 233).

Henderson (1993) states the new paradigm "represents a new synthesis between Western science and religious and spiritual traditions, since it embraces purpose and meaning as fundamental to life processes" (p. 272).

Business, Work, and Spirituality Some consultants see this spiritual component as a natural progression in management theory (Bracey, Rosenblum, Sanford, and Trueblood, 1990). Lee and Zemke (1993) state that business and social reasons have led to the interest in the spiritual side of work. The former includes the upheaval in organizational structures in which the role of middle managers has been eroded or eliminated; the middle managers who remain have changed as well and are often baby boomers who bring a value for meaningful work to the workplace. Lee and Zemke (1993) cite the appearance of articles on spirituality in *The Wall Street Journal* and *Time* magazine, among other examples, as indications that the discussion of spirituality or religion is more widely accepted socially.

Thus, spirituality is an intrinsic element of the emerging paradigm. In this paradigm, the challenge is to utilize intuition, inner knowledge, compassion, and spirit in a period of constant and discontinuous change. This can be done in different ways for each individual and organization. Rather than the development of an ideal or a plan in this new paradigm, which is a reverting back to the static Newtonian belief of the old paradigm, the recognition of the process which is occurring enables action to be taken that is appropriate for the situation.

Global Issues and The Role of Business There is significant documentation which indicates the problems we face are extensive and significant. Environmental, social, economic, and political problems are global and systemic and they continue to escalate. Capra (1993) writes that we hold to "an outdated world view, a perception of reality inadequate for dealing with our overpopulated, globally interconnected world" (p. 231) and political leaders, business leaders, or educational leaders have failed to realize "that a profound change of perception and thinking is needed if we are survive" (p. 233).

Yet because business is more flexible, responsive, and adaptive than other institutions such as government and educational systems, and as a dominate social institution worldwide, it can be a leader in the emergence of the new paradigm.

Business strategies have been based on the old paradigm, reflected in scientific management, rigid or hierarchical structures, the reliance on rational data to make decisions, and the belief of unlimited material progress through economic and technological growth. The paradigm ignores the strengths of business: the entrepreneurial spirit, the use of intuition to go beyond or against the "facts", and a passion to make a contribution in products or services.

What does business look like in the new paradigm? As alluded to previously, there is no best way of doing business in the new paradigm. Business can be based on the constants of change, good questioning, and consciousness, with the goals of development of those associated with it. As a leading institution, business provides service to the surrounding community and is socially responsible.

However, while the optimal method of doing business is described broadly, we can imagine that the old paradigm is likely based on fear and competition, while the new paradigm is based on cooperation and contribution. The former may have a rigid hierarchical structure, while the later is flexible. The former in concerned with satisfying stockholders while the latter is concerned with satisfying stakeholders which includes employees, customers, suppliers, surrounding community, environment and stockholders (Zukav, 1993).

Workplaces that Work A new paradigm for work that reflects the values and behaviors of an emerging consciousness and sensibility can be seen in some organizations. It reflects a new sense of power, values, ownership, productivity and profit.

It can be found in companies such as Ben and Jerry's, The Body Shop, Patagonia, and others. Founders Ben Cohen and Jerry Greenfield of Ben and Jerry's intentionally changed their way of doing business. Working to challenge the assumption that a business cannot be profitable and help

the community at the same time, Cohen maintains that "We cannot suspend our values during the workplace and think we will have them back when we get home.....There is a spiritual dimension to business just as to individuals" (Fox, 1995, p. 231). Ben & Jerry's donates 7.5 percent of pretax profits to community organizations,

Although The Body Shop, selling natural cosmetics, has been critiqued by *Business Ethics* (1994) for unsavory business practices, each franchise pays its employees to volunteer for community service projects (Ray and Rinzler, 1993, p. 222). A $673 million company in 1994, the founder, Anita Roddick, explains that The Body Shop has "a lot of feminine principles [that] are endemic within it, like gut feelings, instincts" (Ray and Rinzler, p. 223). Patagonia, the outdoor clothing manufacturer who has started producing clothing from recycled plastic, donates 10 percent of pretax profits, favoring grassroots groups who often cannot get funding from more traditional funding agencies. Reflexite, located in New Britain, Connecticut, made its employees owners and continues to grow in spite of competition from 3M.

In *A Great Place to Work: What Makes Some Employers So Good - and Most So Bad*, Levering (1988) found that companies described as good workplaces by their employees are distinguished by the "nature of the *relationship* between the company and the employees... *trust* characterizes the attitude of both sides of a good employment relationship" (p. 23). Management views workers as skilled colleagues who want to be productive and gives workers the means to make these strengths effective for the organization.

Yet some work organizations are developing the worker-employer philosophy even further. In The Art of Leadership (1987), Max DePree, chairperson of Herman Miller, the office furniture manufacturer, discusses that while participative management is essential, leaders are to create covenantal relationships (relationships that fulfill deep needs and gives meaning to work) with workers. Reaching our potential, he writes, is more important than reaching our goals (Lee and Zemke, 1993, p. 23). Herman Miller limits top compensation to twenty times the average company salary (Reed, 1995, p. 51).

Spirituality and Profit Peters and Waterman write In Search of Excellence (1982) that a spiritually oriented business is not only possible, but also desirable in financial and human terms. They studied 75 companies which were judged excellent according to financial and other measures. One of the eight characteristics of these companies is that they help employees find transcendent meaning in their work.

A comparison of the financial performance of the seventy publicly owned companies from *The 100 Best Companies to Work For in America* (Levering, Moskowitz, and Katz, 1984) to Standard & Poor's 500, the former were more than twice as profitable; between 1975 and 1984, the stock price of the best companies appreciated at almost three times the rate of the 500 (Hardy, 1990, p. 176). Brown and Van Dyck's analysis of the list of publicly owned companies compiled by Levering et al. found that from 1981 to 1985, these companies earned 17.69 percent more in average compounded total return than the Standard & Poor's 500. "The evidence is strong that the companies that treat their workers well benefit on the bottom line" (Levering et al., 1984, p. 260).

Medtronic is described by its CEO William M. George (1993) as a company that doesn't mix "religion and business, but we certainly do not shy away from the spiritual side of our work and the deeper meaning of our mission to save lives" (p. 3D). $1,000 invested in stock in 1960 was worth $1.65 million in April 1993.

Spirituality and Work: An Argument Against

If workers are bringing the need for connection and meaning to work and workplaces are able to consider spirituality and still be profitable, why does consultant Tom Peters object to spirituality at work? He writes that "several recent business tracts [including DePree's, referred to earlier in the discussion] seem to cross a line, to blur the borders between church and corporation" (1993, p. 3D). Further reading in this article indicates that Peters considers "enhanced competitiveness" as the point of "secular corporations" (p. 3D). Lee and Zemke (1993) write that Peters does agree that "non-intuitive, linear, rational management has made a mess of American companies. Moving away from that is positive....By getting overly into the spiritual stuff, the pendulum is swings too far" (p. 26). Peters fears that such a movement could backfire and the empowerment movement would be "squash[ed]...before it reaches full flower" (p. 26).

In addition, legal difficulties have been encountered by several organizations in their attempts to deal with spirituality in the workplace (Lee & Zemke, 1993, p. 26).

While these are legitimate concerns regarding spirituality and the workplace, workers are entitled to an environment where they can pursue the development of their interests, talents, and abilities. It is natural that workers bring all parts of themselves to the workplace, including spiritual.

Implications for Human Resource Development

Organizations use a variety of techniques such as participative management, strategic management, quality circles, and other techniques to deal with a significant change in social, economic, political, or environmental conditions. Land and Jafram (1993) write that "All of these solutions have value. Most have failed to bring about the desired results....in the hundreds of organizations we have worked with...implementing these changes has usually created more problems than it has solved" (p. 264). Their theory for the failures is that these new techniques interferes with the way in which the organization has always worked and "natural resistance to change rears its head and either openly or unconsciously sabotages the solution" (p. 264).

Instead, changing conditions demand that organizations utilize workers' intelligence, creativity, and resources to develop new solutions. Land and Jafram (1993) write, "Human labor is no longer a disposable commodity, but a unique creative resource, in which an *individual's development is as valuable as the organization's growth*...[this] is characterized by people in the system functioning in trusting and interdependent relationships...by acknowledging the unlimited creative potential of its people...." (their italics) (p. 265).

Human resource development professionals already assume the responsibility of developing human expertise through organizational development and training and development in order to improve individual, process, and organizational performance. Most organizational structures are not flexible enough to cope effectively with the rapid changes occurring in the world. Work will need to rely more and more on workers being better workers to maintain or increase profits. Combining the perspective of the new emerging paradigm occurring in work with the already existing role of the human resource development professional, the professional can provide an essential avenue to enable organizations to reflect thoughtfully on the need to be committed to an individual's development, in order for the individual and the organization to survive and flourish and to be a model for other societal change that must occur.

Organizations may need to be educated regarding the paradigm shift occurring in work. The element of spirituality seems to be entering the realm of work. Professionals can serve to remind business that if productivity is to increase, attention must be paid to workers and their need for meaning and making contributions to life. An uplifting work environment need not be idealistic; serving as change agents, professionals can begin to imagine alternatives and remind organizational leaders of workers' need for meaning and desire to achieve goals seen as worthwhile. Professionals can work to create organizational structures which tap into worker motivation, vision, and values.

Perhaps most of all, professionals need to be creative and resourceful; as previously mentioned in this discussion, work in the new emerging paradigm cannot be described as it could in the static Newtonian sense. Openness to possibilities and broad thinking is critical.

The field of human resource development is a discipline in which the concerns of the worker may be addressed; more research on the new emerging paradigm around work and its implications for spirituality and work is warranted.

Conclusion Geore (1993) stresses the new understanding that the personal identity of workers, spirituality, and work are all interconnected :

> After all, we spend more time at work than in any other part of our lives. Shouldn't we find significance in our work and the opportunity to use our mind and feeling while appealing to 'the animating or life-giving principles' within us?...This isn't practicing religion per se but rather devoting our whole being toward a higher purpose in our work (George, 1993, p. 3D).

The integration of work and spirituality entails a significant shift in the way we view work; no longer do we simply "work to live" but rather "live to work".

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Looking through a New Lens: Different Views of Human Resource Development

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This research validated three views of human resource development (HRD) within United States and Canadian organizations: (1) development-focused, (2) issue-linked, and (3) strategic. Telephone interviews with 20 external consultants defined descriptors and identified organizations fitting one view. Telephone interviews with 45 internal contacts served by these consultants confirmed the designation through high inter-rater reliability (phi = .47, $p < .01$ for development-focused; phi = .32, $p < .05$ for issue-linked; phi = .57, $p < .01$ for strategic). Questionnaire surveys of 1275 organizations provided further evidence. Implications are discussed.

Given changes in the workplace and within organizations, now seems an appropriate time to consider a change in how we at the field through a new lens. By doing so, we should obtain some different views.

Previous definitions of human resource development (HRD) provided the backdrop for the present research. Nadler (1970, 1983, 1990) defined HRD as those activities which focus on producing behavior change, general growth, and performance change. In all cases, Nadler focused on the individual within the organization.

In recent years, authors identified other characteristics critical to HRD. For example, Gilley and Eggland viewed HRD as leading to performance and personal growth "for the purpose of improving the job, the individual and/or the organization (1989, p. 5)." Chalofsky suggested that HRD provides "learning interventions for the purpose of optimizing human and organizational growth and effectiveness (1992, p. 179)." Carnevale, Gainer, and Villet (1990) suggested that the strategy of the organization can drive the focus of the HRD function.

Rummler and Brache (1990) presented a model for improving organizational performance. This model included a three-by-three matrix, with one dimension focusing on three levels of performance (organization, process and job/performer levels) and the second dimension focusing on the three performance needs (goals, design and management). Within this matrix, they defined nine performance variables to be addressed in organizational improvement efforts: organization goals, organization design, organization management, process goals, process design, process management, job/performer goals, job/performer design, and job/performer management. With their focus on performance and performance variables, Rummler and Brache recommended that the Human Resource Development function become the Performance Department.

Swanson (1989) suggested that HRD include economic theory, systems theory, and psychological theory. Wimbiscus (1995) expanded on that discussion to suggest how the Rummler and Brache model and the Swanson model can be viewed as compatible. Basically, Wimbiscus suggested that the three performance levels of Rummler and Brache (1990) can be characterized by different rankings of the three theories identified by Swanson. For example, when focusing on Rummler and Brache's Organization Level, Wimbiscus suggested that economic theory was most important, followed by systems theory, followed by psychological theory. Wimbiscus then highlights the work of a major contributor to the field whose work represents one of the nine cells.

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As mentioned by Wimbiscus, the Rummler and Brache (1990) model provides an interesting framework, but no empirical evidence exists to support the model. Furthermore, a potential problem with the theory involves the ambiguity that can exist between the performance levels of the organization and the processes. Particularly as more organizations undertake efforts to manage processes, the distinction between the organizational performance level and the process performance level becomes increasingly blurred.

Using the above mentioned sources, we constructed three views of human resource development within organizations. The purpose of the research was to identify three views that actually exist and operate within organizations. The three views are as follows:

1. *Development-focused*: Training is provided for all managers, supervisors, and employees primarily for the individual's benefit, or to develop a particular management style. It is not linked to or driven by a strategic business issue.
2. *Issue-linked*: Training provides tactical support for business issues. However, no top-down, organization-wide implementation plan currently exists.
3. *Strategic*: Training is driven top-down by strategic imperatives. Executive vision exists, and planning has occurred toward a specified strategic direction.

The following questions guided the research studies. What are the critical elements distinguishing these three views of human resource development? To what extent do experts inside and outside organizations agree on the specific view characteristic of an organization? To what extent are organizations in the U.S. and Canada adopting approaches other than development-focused? To what extent can organizations be classified into one of the three views?

Having answered these questions, we want to consider the implications for measurement of human resource development efforts within the context of each view.

Study 1

Methods

Subjects. A stratified, random sample of 20 external consultants was selected. Stratification was based on geographic location and subject-matter expertise.

Materials. The materials included a telephone interview script, as well as a separate questionnaire sent by fax. The interview began with an introduction to the models, described above. Consultants were asked to think of an organization with training and development efforts classified as development-focused. Several questions probed for critical elements characteristic of that approach within the organization. Next, consultants were asked similar questions regarding organizations whose training efforts were considered issue-linked and strategic. Finally, we requested contact information for two or more organizations characteristic of each view, along with permission to call.

Results Additional characteristics were identified by the consultants. These characteristics appear in Table 1. In addition, these consultants were able to provide us with the names of organizations characteristic of each view.

Table 1. Characteristics of Each View Identified by Consultants

View	Characteristic Identified	Percentage of Responses
Development-focused:		(N=98)
	No link exists between the HRD initiative and business issues and strategy.	21%
	There is a focus on general management and worker skills.	21%
	The initiative is driven by HR.	13%
	Catalog training exists.	8%
	Little or no executive support exists.	6%
	Open enrollment exists.	3%
	Other	27%
Issue-linked:		(N=93)
	HRD initiative is not driven from the top.	31%
	Competitive and/or survival issues are driving the organization.	14%
	Workforce needs basic/foundation skills.	9%
	Quality initiative is a key component.	9%
	HRD initiative is linked to business issues.	5%
	Teams initiative is a key component.	5%
	Other	24%
Strategic:		(N=91)
	HRD initiative is driven from the top.	35%
	Competitive and/or survival issues are driving the organization.	21%
	Quality initiative is a key component.	13%
	Multi-level involvement exists.	7%
	Other	11%

Discussion This first study provided some validation of the alternative views. External consultants were able to use the brief descriptions and define additional characteristics. More importantly, they were able to identify organizations that fit into each of the views. This information provided the base for the second study.

Study 2

Methods

Subjects. We began with a population of 182 organizations, as identified by the consultants in the previous study. This population of organizations included 64 considered "development-focused," 64 considered "issue-linked," and 54 considered "strategic," as described by the consultants. We randomly selected 45 organizations, 15 of each model, to contact.

Materials. Interviews began with questions regarding major issues facing that organization and ways in which training efforts focused on these issues. Respondents were asked true-false questions describing organizational and training function characteristics. Finally, they were given the three definitions and asked which best described their training efforts.

Results The responses of the internal contacts within organizations tended to confirm the responses of the consultants with regard to business issues. (See Table 2.) Furthermore, a chi square (X^2 = 17.82, df = 4, $p < .01$) confirmed the difference based on the view characterizing the organization. All organizations faced competition and survival issues. Development-focused organizations tended to mention the need for basic skills as a major issue. In contrast, the strategic and issue-linked groups tended to mention organizational change as a major issue.

Table 2. Internal Contact Responses to Organizational Issues by Different Views

View	Issues	Percent
Development-focused	Basic skills needs	45%
	Competition/survival	55%
	Change initiative	0%
Issue-linked	Basic skills needs	9%
	Competition/survival	18%
	Change initiative	73%
Strategic	Basic skills needs	11%
	Competition/survival	26%
	Change initiative	50%

Table 3 presents the responses to the question: "In what ways are your training efforts focused on these issues?" A chi square (X^2 = 13.04, df = 4, $p < .05$) confirmed the significant differences among the responses. None of the development-focused respondents reported that "training supports organizational change effort." In contrast, training was reported to support such change efforts by those with the strategic view (57%) and by those with the issue-linked view (42%).

Table 3. Ways in Which Training is Focused on Organizational Issues by Different Views

View	Ways Training Focused on Issues	Percent
Development-focused	Supports organizational change effort	0%
	Provides skills training	86%
	Not focused on issues	7%
	Other	7%
Issue-linked	Supports organizational change effort	42%
	Provides skills training	42%
	Not focused on issues	11%
	Other	5%
Strategic	Supports organizational change effort	57%
	Provides skills training	35%
	Not focused on issues	4%
	Other	4%

We compared the responses of the consultants from Study 1 with the responses of the organizational contacts in Study 2. If the views have any validity, we should find that the external consultants and the internal contacts agree on the model characterizing the organizations. External consultants and internal contacts did, in fact, agree on whether the organization's training efforts are development-focused (phi coefficient = .47, $p < .01$), issue-linked (phi coefficient = .32, $p < .05$), or strategic (phi coefficient = .57, $p < .01$).

Not all of the organizations fit into one and only one of the views. About 18% of internal contacts classified their training and development efforts as fitting into more than one approach. All these organizations had more than 1,000 employees.

Discussion The second study provided further validation of the three views. Internal organization contacts were able to describe issues facing their organizations and the ways in which training supported those issues. The responses to these questions confirmed the characteristics of the three views. In addition, we observed significant correlations between the types identified by the external consultants and those chosen by the internal contacts. Finally, internal organizational contacts from larger organizations revealed multiple views, and therefore, multiple strategies were being undertaken with respect to HRD in their organizations.

Study 3

Methods

Subjects. A survey was mailed to 4184 organizations throughout the U.S. and Canada. To increasethe response rate, a postcard introduced the survey one week in advance of the mailing. In addition, a donation of $1 was offered for each response. A total of 1275 organizations responded (or a 30% response rate).

Materials. Thirty-four closed- and open-ended questions asked respondents about the types and success of human resource development efforts, types of consulting assistance requested, types of technology being used in training, and level of involvement in training, as well as "demographic" items

regarding the type of business, number of employees, and number of employees receiving training. One item asked respondents to classify their organization's HRD efforts according to one of the following three views:

1. *Development-focused*: Those for whom training is focused on the issue of improving skills. Training is provided for managers, supervisors and employees primarily for the individual's benefit or to develop a particular management style.
2. *Issue-Linked*: A competitive issue is driving the organization. No top down vision or executive plan currently drives the training. Training is providing tactical support for identified issues.
3. *Strategic*: A competitive issue is driving the organization. Executive vision exists, and planning has occurred to move toward a specified strategic direction. Training is driven top down by this strategic direction and provides tactical support.

Results Table 4 shows the percentage of organizations choosing one or more views. Most respondents considered their organizations' training to be development-focused. The next largest percentage appeared in the strategic group, followed by issue-linked.

A series of chi square tests were used to determine whether the three types of views could be differentiated. Table 5 displays the items showing significant differences among the three views. In all cases, those with a strategic view tended to need more consulting assistance, but particularly in linking training to organizational issues, consulting on quality initiatives, obtaining and maintaining management support, conducting training, customizing programs to fit needs, and program follow-up and reinforcement. Those with the issue-linked view displayed levels of needs similar to those with the strategic view in the areas of linking training to organizational issues and conducting training. In terms of consulting on quality initiatives, customizing the program, obtaining and maintaining management support, and program follow-up and reinforcement, those with the issue-linked view indicated needs somewhere between those with the strategic view and those with the development-focused view.

Table 4. Distribution of Different Views of HRD

Views of HRD	Percent (N=1275)
Development-focused	47%
Strategic	30%
Issue-linked	14%
More than one type	9%
No response	(113)

Table 5. Types of Consulting Assistance Needed During the Past 12 Months

Types of Consulting Assistance	Chi	df	p
Linking training to organizational issues	10.59	2	<.01
Consulting on quality issues	37.62	2	<.001
Consulting on self-directed work teams	3.11	2	n.s.
Obtaining and maintaining management support	7.73	2	<.01
Recruiting trainees and filling classes	1.56	2	n.s.
Conducting training	7.32	2	<.05
Consulting in implementing HRD program	2.31	2	n.s.
Customizing training to fit your needs	15.09	2	<.001
Maintaining fresh and interesting classes	1.58	2	n.s.
Evaluating the program	3.17	2	n.s.
Program follow-up/reinforcement	6.79	2	<.05

The three views differed significantly on the two remaining variables, relating to decision-making and level of management involvement in HRD initiatives. One question asked "To what extent was the management of your organization involved in a decision to buy outside programs and services?," and respondents were asked to indicate "not at all" "not very," "somewhat," and "very." A chi square revealed significant differences among the three views ($X^2 = 72.05$, df = 6, $p < .001$). Simply examining those who responded with "very" indicates the type of differences. Among those with a development-focused view, 47% reported such involvement; among those with an issue-linked view, 28% indicated such involvement; and among those with a strategic view, 62% indicated management involvement in decision-making.

Similar results appeared when we asked, "To what extent was the line management involved in the implementation of HRD initiatives?" ($X^2 = 45.45$, df = 6, $p< .001$). Again, we examined those who responded with "very." Among those with a development-focused view, 27% reported that level of involvement; among those with an issue-linked view, 19% indicated such involvement; and among those with a strategic view, 42% reported a high level of management involvement.

Two demographic variables showed significant differences among the three approaches. One involved the type of organization ($X^2 = 36.55$, df = 20, $p < .05$). Specifically, financial government agencies tended to use the development-focused approach more frequently than the other approaches. High technology manufacturing organizations tended to focus on the issue-linked view. Finally, institutions and manufacturing organizations tended to choose the strategic approach. The other variable with significant differences was the number of employees receiving training annually ($X^2 = 42.84$, df = 14, $p < .001$); and this was the case, even though the number of employees within the organizations showed a similar distribution. Those with a strategic view tended to train more employees, while those with a development-focused view tended to train fewer employees.

Discussion These results lend further confirmation to the notion of three views of HRD: development-focused, issue-linked, and strategic. These views represent a focus on different objectives. Those with a development-focused view reported less needs for consulting assistance. They were less likely than the strategic group and more likely than the issue-linked group to involve management in decision-making and implementation. Finally, they tended to report the least numbers of employees participating in training.

Those with an issue-linked view tended to need assistance primarily in linking training to organizational issues and conducting training. Unlike those with the strategic view, these issue-linked respondents were less likely to involve management in decision-making and implementation of HRD efforts. This group reported numbers of employees participating in training that were between the strategic and the development focused groups.

Organizations with a strategic view indicated that they needed consulting assistance for certain initiatives, such as linking training to organizational issues, customizing training, dealing with quality initiatives, conducting training, and program follow-up and reinforcement. Furthermore, they tended to involve management in decision-making and implementation of HRD initiatives, and they reported a larger number of employees participating in training efforts.

Conclusions

This research provides clarification of differing views of human resource development within organizations. The studies helped to define three distinct views. Results showed high inter-rater reliability in classification of organizations and high internal consistency in descriptors used. Finally, we confirmed that all three types, as well as some combination of types, exist within U.S. and Canadian organizations.

Relevance for Theory and Practice

Results clarify and enhance previous theoretical efforts at defining HRD. Training and development encompasses at least three distinct views, confirming the definitions proposed by Nadler, Gilley and Eggland, Chalofsky, Carnevale, Rummler and Brache, and Swanson.

More importantly, we propose that the three views call for distinct approaches to needs assessment and evaluation. HRD functions with training efforts characterized as development-focused should concentrate on the use of needs assessment of skills, knowledge, and attitudes to determine the next steps for training. Evaluation efforts should similarly measure gains in skills, knowledge, and attitudes obtained through human resource and training interventions. For maximum benefit, such evaluation efforts should focus on skills, knowledge, and attitudes of importance to the individuals and the organization.

In contrast, HRD functions with training efforts characterized as strategic should begin with a "strategic needs assessment." Since the organization's strategy drives all aspects of the organization, including HRD, the HRD function must focus on identifying the skills, knowledge, and attitudes needed to achieve the goals and directions of this strategy. Then, HRD must undertake a needs assessment to determine to what extent the skills, knowledge, and attitudes are in place. Following the training intervention, "bottom-line" measurement becomes critical, since the intervention was designed to impact that bottom-line. We would suggest that HRD still must measure whether skills, knowledge, and attitude also changed. Finally, HRD functions with training efforts characterized as issue-linked face the most difficult challenge. First, HRD must identify the primary business issues (issue identification). Next, they must undertake an issue assessment, followed by a needs assessment. Such as issue assessment should include data collection from all levels within the organization to determine the critical issues. Then, HRD must identify ways in which proposed HRD initiatives link to these issues. As with the other approaches, the training intervention must include evaluation of changes in skills, knowledge, and attitude, as well as changes in the status of the business issue(s). Again, the HRD function must continue to stress the link between the outcomes of the training intervention and the business issue.

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Creating a Learning Organization: A Case Study of Outcomes and Lessons Learned

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This study documents the results of implementing a learning organization at the Electrical and Fuel Handling Division of Ford Motor Company. A qualitative case study approach was used. Findings indicate: significant business performance; individual learning on personal, interpersonal and professional levels; collective learning through discourse and relationship building; and organizational impact through application, self-directed learning, and systems thinking. Impediments include management support, peer support and resources. Implications of implementing a learning organization are also discussed.

Gaining a competitive edge through learning is a strategy being used by some organizations to enhance their standing in today's globally competitive business environment. Companies such as EDS, Shell, Hewlett-Packard, Harley-Davidson, Chrysler and others are becoming learning organizations to both increase innovation and improve performance. Becoming a learning organization involves adopting a holistic, systemic focus (Senge, 1990; Watkins and Marsick, 1993). It means becoming an organization that, "learns continuously and transforms itself" (Watkins and Marsick, 1993, p. 8). Although some companies have adopted the learning organization process, the outcomes, impact and challenges of such initiatives are not well-documented.

This article highlights a learning organization implementation case study of the Electrical & Fuel Handling Division (EFHD) of Ford Motor Company. EFHD is part of the automotive components industry, one of the largest industries in the world. EFHD supplies starters, alternators, wiper motors, injectors, fuel pumps, and throttle bodies to Ford and other automobile manufacturers. Chartered in 1988, EFHD originally managed facilities in Michigan and Indiana. Today, EFHD is a global business with 6,135 employees at facilities in Michigan, Indiana, Ireland, Great Britain, Hungary, China, Japan, and Mexico. The majority of the plants are unionized. 1994 sales and profits showed an unprecedented and dramatic turn around for the business. EFHD attributes a significant part of its resurgence and performance to becoming a learning organization.

Learning Organization: A Strategic Imperative

EFHD embraced Peter Senge's model from the 1990 book *The Fifth Discipline* as a framework for implementing the learning organization process. EFHD believes that the key to becoming a best-in-class, high performing organization lies in their ability to learn faster and more effectively than the competition. EFHD has designed plans to improve both work and interpersonal processes in this quest. EFHD's Vision states, "As a Learning Organization, we will generate a high level of customer satisfaction by providing subsystems, products, and services with best-in-class quality and best-in-class costs." EFHD's goal is to achieve maximum

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organizational performance through learning. Intended results include:

- Learn faster than the competition
- Achieve maximum value and zero waste
- Optimize knowledge *and* understanding
- Use energy to be a best-in-class producer (rather than fighting political battles)

EFHD's Strategic Initiative proposes, "To be an organization that fosters the five disciplines of the Learning Organization; specifically, Systems Thinking, Personal Mastery, Shared Vision, Team Learning, and Mental Models" (for definition of the disciplines see Senge, 1990). EFHD has worked to create an infrastructure supportive of learning. The infrastructure is designed to create and sustain the learning organization process and incorporates:

- Cultivating a supportive culture
- Promoting learning organization awareness
- Building capacity and involvement
- Adopting a community focus

Knowledge gives many U. S. companies leverage in competitive markets where total quality management is embraced and emphatically applied to analyzing problems and their causes. Quality tools such as problem solving models, root cause analyses, or statistical process control charts are revered as infallible management instruments. These analytical, linear tools, are an important part of the TQM movement. Yet for EFHD, these tools were inadequate to meet the goal of creating a learning organization able to understand and transform the organization's system. EFHD's goal of creating a learning organization was based on strengthening "soft skills" through developing true openness and understanding of assumptions that govern behaviors and beliefs about the organization and its members. Effort was also focused on cultivating open and honest communication among all employees. Of course, these goals needed to be pursued while embracing continuous improvement for the EFHD.

EFHD began the learning organization initiative in 1992 with the formation of the Product Launch Success Team, chartered to create high performance launch processes of new and current product lines. Simultaneously, the executive management (Division Operating Committee) began its efforts to create a culture based on team learning and shared vision. Although becoming a learning organization is a strategic imperative of EFHD, participation in the process is entirely voluntary. Today, there are 30 active team learning projects involving 1200 EFHD employees.

Becoming a learning organization at EFHD was a grass roots effort. The learning organization process existed for two years before a formal course to learn about the process was created. The course was developed out of employee demand to learn more about the process. The number one reason employees sought to become involved in the learning organization process was curiosity based on what they had observed and heard in the organization. One employee explains, "I think that if you can start one little group in the organization—if people can learn that working in a team is more fun and better for them personally, they will try it."

Research Questions

The purpose of this study was to understand the effects of implementing a learning organization at EFHD. Questions guiding the study included: 1) How do participants apply the theoretical concepts of a learning organization? and 2) What prevents the effective implementation of a learning organization process?

Methodology

A qualitative case study design was used to investigate the research questions. Participants were a globally and hierarchically diverse sample of EFHD employees who voluntarily participated in a sixty-hour introductory course on the theory and practice of the learning organization. Data were collected through participant observation in both training and work settings, using semi-structured post-training interviews, written surveys, electronic mail, journals, and dialogue meetings. Field notes were taken during observations, and interview and dialogue sessions were tape-recorded and transcribed verbatim. Twenty-five employees participated in the interviews.

Data were analyzed using the constant-comparative technique. Data were organized into themes using systems dynamics tools (hexagon process and causal loops). Trustworthiness of the data was verified through the use of multiple data sources, member checks, and longitudinal data collection. EFHD employees also assisted in the data analysis process.

Results

EFHD's results are impressive. Key areas of performance improvement include: a dramatic financial turnaround between 1990-1994, improved employee attitude surveys, company leadership in achieving total productive maintenance checkpoints, and new product launches that exceed budget objectives in quality costs, and timing. The goal of the study was to probe beyond performance measures and understand results from a learning perspective. These results indicate that the nature of the learning was multifaceted. The learning will be examined on individual and collective levels, and the impact of both will be assessed in relationship to the EFHD organization. Impediments to becoming a learning organization will also be explored.

Individual Learning The scope of individual learning was evident on personal, interpersonal, and professional levels. Participants engaged in deeply reflective learning and transferred this learning to the work environment.

Personal Development. A consistent theme among participants was the improvement in personal mastery they experienced as a result of becoming involved in the learning organization. Personal mastery, one of the five disciplines, is the process of articulating and pursuing personal vision. Participants felt the process gave them a unique and safe opportunity to engage in self-assessment. One person remarked that, "[the process] seemed to be very suitable for me because I am in sort of a self-assessment role." The individual learning was also characterized by critical reflection, and in some instances life change. Participants spoke of being provoked to think in new ways and how their world view had been challenged. Before one participant became involved, he shared, "I didn't realize that there are a bunch of things that I don't like to face. . . . So now I look at how I view things. Because I need to also turn the situation around and see it from someone else's viewpoint." Other outcomes include seeing things differently as in this employee's experience, "I have been trying to walk in their shoes. Try[ing] not to get upset at others, and know that others have things on their minds and that [their behavior] might not be a true reflection of themselves." In one instance and engineer changed so dramatically that he was teased by his co-workers about becoming "soft."

Interpersonal Development. Participants also reported enhanced family relationships with examples ranging from improved marriages to smoother relationships with children. One employee noted, "I am trying to be more compatible with my family and look at their side instead of being so one-sided. I have never been willing to listen. I always make the conclusion beforehand." Benefits were also reported on a community level, for instance, one participant felt it enriched his ability to be a Cub Scout Leader.

Professional Development. Notably, participants felt that they had benefited more directly personally than professionally, but were quick to add that they believed their learning would transfer to the workplace. One participant observed, "We have to satisfy ourselves and feel that we are giving and getting something from the company." Another participant shared, "It has helped me a great deal in my personal life, and I think that when your personal life is a lot

sounder it will also help in your work environment." Some of the employees were surprised that EFHD would even encourage them to create vision and balance work and family life. One woman participant exclaimed, "This is not something you expect to get at work!" Another enthused, "I love these ideas because they apply at work and home." Another person reflected that, "Most of the things that I learned will help more as a person moreso than an employee." As with the philosophy of the learning organization, strong individuals make strong teams. One woman sums this up well, "Until we can see ourselves in the right light we cannot see anybody else 'cause I think it always starts with a personal thing until I can see me or see what I really am, I can't see what you are. So, I think if we start with self we can have a better impact on the whole."

Collective Learning Team learning flows out of individual learning, and is another discipline emphasized in the learning organization. Essentially, it is the ability to create meaning and knowledge collectively. It is not team building which focuses on interpersonal communications and building spirit, but rather a form of discourse that facilitates open dialogue and inquiry. Team learning does not demand a congenial, conflict-free process, but rather an openness to share world views (mental models) and appreciate the ideas of team members.

Development through Discourse. During the dialogue process the participants also seek common ground or a picture of where they want to go together, also known as the discipline of shared vision. Participants reported significant learning related to this aspect of the learning organization. One employee shared, "even with the many different people with different educational backgrounds we all worked well together." Another person commented, "We're all human, we want pretty much the same thing."

Workplace Community Development. Participants reported a new appreciation for the diversity of the team and tolerance of divergent viewpoints. There was more willingness and expectation to be honest. Feelings were recognized as valuable information for problem solving and creating as noted by one participant, "We are people with feelings and we have to deal with these. Our co-workers are not just people we work with, but they are people. We need to start understanding each other more. Work relationships improved in some cases, as the process is designed to minimize rank and positional status. Participants spoke about the blurring of hierarchical lines. One employee explains his experience in the learning organization course, "From the first moment I walked in, there seemed to be this invisible line, but then it went away." Another person observed, "Collective learning is good. I think that's the only way you're' going to be able to create a world class manufacturing plant is to learn together." Another employee discusses the barriers that characterize EFHD:

> Somehow we've gotten the idea that we are different [based on rank] and we have put up an imaginary boundary based on the demographics of the world. . . . we put up all these imaginary lines and the world is not like that. So we put up an imaginary line in the plant, salary and hourly. But, no one cares when I pay my house payment whether I'm hourly or salary. So, why should they have all these boundaries and imaginary lines? All they deep us from doing is what we really need to do to be productive.

In spite of initial barriers, the process has enhanced a sense of community among employees as noted by this individual, "I think as a group we recognized that we were a community and part of that is learning together" Another continued, "It was great to come together with different members of EFHD and leave feeling like a community."

Organizational Implications of Learning The organizational impact of becoming a learning organization ranged from applications such as the formation of teams and study groups to the use of tools and concepts. The participants also initiated self-directed learning projects related to the learning organization, and reported a new systemic awareness of the business and an understanding of their role in it.

Applications. A striking finding was that people actively applied the concepts and tools. Several official learning teams were established, such as the Product Launch Success Team, Total Productive Maintenance Team, Material Cost Reduction Team, and Division Operating Committee. In addition to formal task teams, learning teams were also formed with the sole purpose of practicing the concepts and tools in a safe arena. According to one participant,

> We've taken it to the next level already. We have two groups and we started to intermingle with management. And we started our own [learning] group. We are learning together and getting all our ideas and thoughts together to create something that works for all.

EFHD's development of a learning model also served as a framework to guide application (for learning model description, see Bierema & Berdish, In-Press). EFHD has also created visible reminders such as learning rooms, a learning library, and tools that reinforce the process.

The concept of sharing vision was referred to repeatedly as a key learning from the course. Simply recognizing that it was achievable and that similar values were shared was a breakthrough for many employees. Less tangible, though just as important was the willingness to take risks and sense of courage participants spoke of, as in this instance, "I am geeked and have more courage than I usually have and am ready to rock.." Participants applied the concepts beyond EFHD as in the example of this employee, "I find that some of the things I learned I brought to the board of directors at my church. I constantly zero-in on putting some of that into practice."

Self-Directed Learning. While the teams were busy applying the concepts collectively, several individuals initiated self-directed learning projects to enhance their understanding of and proficiently in the process. As one employee put it, "The more you get into it, the more you will understand and learn." Some employees began aggressive reading programs. One person kept a journal. Others learned how to facilitate and spent hours observing facilitation. Others volunteered to teach the course. Still others used the process to gain college credit as they took advantage of the educational assistance program benefit provided by Ford. Learning was also shared via the electronic mail system. Employees were motivated by a desire to use the tools ands get results. One person remarked, "I don't want to forget this and want to use this to make a difference."

Systems Perspective. Systems thinking, or a holistic perspective, is another of the five disciplines. Participants reported having a new outlook of the business after becoming involved in the learning organization. One learner exclaimed, "I can't believe the interconnections I'm experiencing. It is like learning a new word and then seeing it everywhere where you never saw it before." Employees indicated that the learning organization process helped them look at the whole picture, not just a part of the process. Employees also reported understanding their role in the system better as a result of participating in both the course and the process. One participant identified the high point as, "seeing the company and generally society work together and identify my place in the system. It's good to know what I do will be needed [and] helps me understand the big picture." The systems perspective extended beyond the company to the community. Participants sensed a better connection with the community and the whole system. One woman shared, "[Now,] when I make a decision I look at the whole picture and the ripples, not just the waves."

Impediments to Becoming a Learning Organization Although EFHD has made impressive strides in becoming a learning organization, impediments, or "speedbumps" as one team member termed it, still exist. As with any change, there are concerns about managerial support and a sense that if it fails, it will falter at the middle management area. There is also pressure among peers who either reject or do not understand the process. Finally, employees struggle with a shortage of resources, primarily time, to become proficient at using the new tools, processes and training available.

Management Support. Not surprisingly, management gets the blame when the implementation stalls. Participants crave fuller management support and fear the learning organization process will be abandoned. As one employee observes, "It is something that I think is very beneficial and needs to be backed by higher management. More than just the fact that the statement is made and the classes are good." A metaphor has evolved that refers to resistant managers and employees. They are called the organizational "clay" representing the impenetrable, hard layer in the organization that seems nearly impossible to change. Many dialogues revolve around the notion of "clay' and how to transform it. Another employee

observed, "My management supports it, but it still gets lost somewhere when you get on the job. Perhaps a little more management support that is sincere."

Peer Support. Some participants sensed they were all alone after attending the course and returning to their work area or team to find that no one spoke their new language or understood the vision. The results of this problem have ranged from resignation from the process to recruiting new members to join a learning team. There is also insecurity about applying new tools. To counter this fear, some participants have created learning groups to practice.

Resources. Resources are limited, and the demand for more literature, practice arenas and training has been unremitting. One employee emphasized, "We need to continue to nurture the skills that we learned." In response to the growing demand for resources, a week-long intensive course on the tools, theory and practice of the learning organization was created in conjunction with the local community college. Participants represent global and hierarchical diversity as they learn about the learning organization process.

Implications

What can be learned from EFHD's experience? EFHD has continuously learned as it has pioneered not only in Ford, but in manufacturing in becoming a learning organization. There are no models or recipes, so EFHD's lessons have helped structure their process that is so successful today. Astonishingly, participation is voluntary and after three years, over 1200 employees are actively participating on learning teams. What is the secret to their success? Causal loop analysis of the data for this study indicates that key leverage points lie in fostering individual and team learning and creating an infrastructure to support learning and practice. That boils down to the creation of an infrastructure that supports both learning and performance. EFHD has succeeded at fostering a wide scope of learning impact paralleling Senge's (1994) deep learning cycle which goes beyond developing new capacities to incorporate fundamental shifts in thinking on individual and collective levels.

The EFHD process has also helped employees see how they fit in the larger system, important according to Senge in his views on the community nature of the self (Senge, 1994, p. 26). Becoming a learning organization is a process that has been integrated with ongoing performance improvement initiatives, so rather than having the appearance of "the flavor of the month," the learning organization process has improved work teams, product launch programs, and total productive maintenance procedures. The EFHD experience also shows capacity to learn and change on personal, collective, organizational and community levels.

Fundamentally, EFHD has taken risks to create an architecture or infrastructure that supports learning. They have grounded their learning organization process in the Five Disciplines (Senge, 1990), they have created a model to guide and capture company learning, they have compiled several systems thinking tools to aid the process, and they have added dialogue to the discourse that previously included only discussion. Dialogue is used to continually reflect on how the process can be improved. EFHD also has learning teams, learning rooms, and learning libraries. Finally, EFHD's practice extends beyond the company to the community where EFHD has been instrumental in creating community learning groups oriented toward workforce development.

Conclusion

EFHD is a pioneer in its creation of a learning organization. Not only has the company achieved significant performance results by becoming a learning organization, it has also demonstrated that learning whether personal, collective, or organizational, has an impact on the organization and wider community. An employee captures the spirit of the learning organization at EFHD best:

> We are trying to pick back up the knowledge on the floor and the ability to share it [between hourly and engineers] and we lost it. Now we have a chance to regain it. It's a real tragedy. That's how we got so far behind in this economic race. We were on our way to becoming a service economy, not a manufacturing economy. We need to maintain our manufacturing excellence. The manufacturing excellence touches every life, I don't care what they do, it touches their life. And we in the automobile industry touches just about everybody. People don't even think about it. People think that it's just a part of living and if it goes, they can live without it. Well, they can't. That's false, that's false. We need this to keep America moving. My vision is to see EFHD have the best running equipment in all of Ford Motor Company.

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Team Sensemaking: An Imperative for Individual and Organizational Learning

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A process model of team sensemaking is developed through a review of the collective learning literature, in concert with preliminary findings from an exploratory study of an educational cohort. Team sensemaking is conceived as an embedded communicative process involving components of an organization that develops extant knowledge and creates collectively shared meaning. The paper concludes with implications of this model for practice and research in relation to the learning organization.

Those practicing in and studying organizations concur that the nature of our organizational environment is complex, global, and continually changing. There would also appear to be some agreement among this group that an organization's competitive advantage now revolves around its ability to explore and develop its internal strategies and characteristics (Kiernan, 1993; Ulrich & Lake, 1991). In other words, competitive advantage is incumbent on an organization's ability to acquire, use, and generate collective knowledge--in effect, learn. Organizational learning has become the imperative for anything and everything from organizational survival to the development of high performance work environments (Doz & Prahalad, 1991; Senge, 1990; Hamel & Prahalad, 1994). Though consensus has not been reached, researchers and practitioners alike have devoted a fair amount of effort in defining organizational learning and exploring its applicability (Huber, 1991). Relatively little work has examined how learning is developed on the collective level (Kim, 1993).

Through a review and critique of the collective learning literature, in concert with a longitudinal study of cohort learning in a university setting, we have developed a process model of learning that is presented in this paper. This communicative collective learning model builds on and expands the linkage model developed by Kim (1993) and the team learning models developed by Dechant, Marsick, and Kasl (1993), Marsick and Watkins (1992), and Brooks (1994) by integrating their work with our current knowledge on individual learning, intergroup relations, and sensemaking. Central to our model is the concept of team sensemaking which we see as *an embedded communicative process involving components of an organization that develops extant knowledge and creates collectively shared meaning.* The purpose of this paper is to examine the team-level dynamics related to learning which, implicitly, provide insight into the process of organizational learning.

Our model is grounded in living systems theory (Miller, 1978; Miller & Miller, 1991), postmodern social theory (Habermas, 1971; Giddens, 1979) and the interpretive paradigm (Weick, 1979). We view collectives such as organizations as both a system (von Bertallanfy, 1968; Katz & Kahn, 1978; Checkland, 1981; and Schwandt, 1994) and as an organism (Morgan, 1986). Following these metaphors, organizations located in industries (which are communities) within societies can be viewed as social systems constituted by components or groups comprised

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of sub-components or individuals (people). In this lens, teams are simply socially constructed phenomena or linking mechanisms that integrate individuals and organizations. Combining this with an interpretive paradigm, collectives are comprised of shared systems of meaning where organization members continually make sense of and reinterpret events and actions (Gioia & Poole, 1984). Postmodern social theory expands our understanding of the interconnectedness of these components. According to this school of thought, collective behavior or actions are partly dependent on the mutual knowledge, interpretation, and sensemaking activities of the agents of the collective. Mutual and shared understanding and interpretation and creation of knowledge are the keys to individual and collective learning (Giddens, 1979). The integration of the assumptions intrinsic to these three theories sets the stage for the basic premise of our process model of learning. We believe that, at any level, learning is a collective endeavor that entails the non-rational (Riaffa, 1961; Levinthal & March, 1993) model of making sense of our actions and experiences.

This paper briefly reviews the literature on individual, group/team and organizational learning; sensemaking (Weick, 1995); and intra-team (Berg & Smith, 1987) and inter-team dynamics (Alderfer, 1987; Ancona & Caldwell, 1992). We then present our communicative collective learning model formulated around team sensemaking. We present preliminary findings of an exploratory longitudinal qualitative study that describes the individual and collective-level development of a master's cohort educational program.[1] Through periodic interviews, written documents, focus groups, and class observations we chronicle individual and collective development, learning, and action. Results from this study assist to verify and refine the communicative collective learning model.

The paper concludes with the major implications of this model for practice and research. For the research community, we delineate mechanisms and methodologies to study organizational and individual level learning. The practitioner is provided with guidelines to aid in the development of a context the promotes organizational learning.

Literature Review

To set the stage for our team sensemaking model, a brief review of the literature on learning in organizations, with special empahsis on team learning, is presented below. This is followed by a critique of collective learning theory by findings from the team dynamics literature.

Learning in Organizations The link between the conceptual topic of learning with the structural element of an organization is a widely discussed and increasingly studied phenomenon by organizational practitioners and researchers. Historically, interest in this link was primarily on the individual level, specifically relating to the acquisition of knowledge and skills (Hilgard & Bower, 1966); the organization was studied as a contextual element. For the past 20 years there has been an increased focus on the collective structure as an actor of adaptation and transformation. Researchers studying under the broad rubrics of organizational learning, collective knowledge acquisition, and the learning organization all have an interest in the process of collective acquisition of knowledge and its influence on long-term survival.

Although the major focus of interest in the link between learning and organizations has dramatically shifted from an individual to an organizational level of analysis, our definition of learning at both levels is identical. Researchers and practitioners alike have acknowledged that the process of organizational learning is fundamentally different; however, we have not been able to reflect that difference in our definitions or models of collective level learning (Hedberg, 1981;

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[1] A cohort format is an educational delivery mechanism in which a group of students enter their studies together and experience the dynamics of the collective as they complete a series of common learning experiences over a defined period of time (Barnett & Caffarella, 1992).

Nonaka & Takeuchi, 1995). As Kim (1993, p.40) points out: *organizational learning has to resolve the dilemma of imparting intelligence and learning capabilities to a non-human entity without anthropomorphizing it.*

The work that examines the link between organizational and individual learning has given the most insight into the difference between the two processes. Kim's (1993) OADI-SMM model: observe, assess, design, implement - shared mental models, is the most sophisticated of these models that link individual and organizational learning together and delineate the differences between the two. In this model the transfer of learning between the individual and organization takes place through the exchange of individual and shared mental models. The model does not explicate how or where mental models are shared. However, other researchers (Senge, 1990; Watkins & Marsick, 1993; Brooks, 1994; Nonaka & Takeuchi, 1995) point out that the team structure is the site for the transfer of learning between the individual and the organization. Teams are the essential linking pin between individual and organizational learning. Recently, *team learning* has been spoken about as the mechanism of exchange.

Team Learning. The concept and process of team learning is a relatively unexplored area. A majority of the effort in this field has been concentrated on defining the term.[2] How teams learn is as yet not well defined. Most theorists agree that team learning implies interactions and exchanges between individuals–dialoguing (Dechant, Marsick & Kasl, 1993; Senge, 1990).

The research on team and group learning began with the literature on cooperative learning in the education field. This field was particularly interested in developmental relationships and their effect on student progression (Slavin, 1990). There is a renewed line of inquiry in this link in the literature–cohort learning (Barnett & Muse, 1993). Cohort learning is the concept of putting student together in similar learning experiences over a one or two year period. This literature still focuses on individual effectiveness, however, the collective level of engagement and shared outcome have begun to be explored.

The work on learning and knowledge acquisition on a team level has focused on phases of learning in project and task teams (Dechant, Marsick & Kasl, 1993); *anticipatory learning* (referring to learning for the future) (Sashkin & Franklin, 1993); power differences in team learning (Brooks, 1994); and the effect of deliberations on learning in product development teams (Purser, Pasmore & Tenaski, 1992).

As stated before there has been limited research conducted on team learning; however, the extensive work on team dynamics over the last fifty years sheds light into knowledge acquisition on a team level (Bettenhouse, 1991). Much of the research in group dynamics has spoken implicitly about the process and outcomes hypothesized to be associated with team learning, including the literature on boundary spanning and the transfer of technical information across team boundaries (Aldrich & Herker, 1977; Katz & Tushman, 1979; Allen 1984); intergroup coordination (Malone, 1987); political or persuasive action with external constituents (Pfeffer, 1981; Dean 1987); the engagement of vertical and horizontal communication (Ancona & Caldwell, 1992); and psychological and physical boundaries (Alderfer, 1976). For this paper we will concentrate on three areas that shed light into the role of teams in organizational learning: the work on external activities, performance and internal process (Ancona, 1990; Ancona & Caldwell, 1992); embedded inter-team dynamics (Alderfer & Smith, 1982); and organizational networks (Ibarra, 1993).

Group Dynamics Ancona and Caldwell (1992) found a complex relationship between external and internal processes. They looked at many types of groups' external activities,

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[2] Team learning definitions utilized in the literature include the following components:
A continuous, strategically-used process that results in changes in knowledge, beliefs, and behaviors. Learning takes place through the ongoing dialectical process of action and reflection as a collective discipline involving mastering the practices of dialogue and discussion. These are enacted through changes in policies, procedures and systems (Dechant, Marsick, Kasl, 1993; Watkins & Marsick, 1993).

including *ambassador activity*, which focuses on influencing top management; *task coordinator activity*, which concentrates on coordinating work across organizations; and *scout activity*, which involves scanning for ideas and information across the organization. Most importantly they found that *scout activity* is negatively related to both internal task process and cohesiveness. Diffusion of knowledge is a necessary but not sufficient condition for organizational learning (Kim, 1993). Therefore groups or collectives that diffuse information may lack the internal capacity to engage in collective learning.

In addition, research has indicated subgroups (identity and task) have differing degrees of identification and involvement with the group (Alderfer, 1987). The literature on personal networks in organizations has complementary findings indicating that interaction networks are embedded in organization contexts which produce constraints on women and racial minorities which, in turn, cause their networks to differ from those of their white male counterparts in composition and relationship. Both these literatures indicate that knowledge acquisition in teams may occur for individuals yet may not occur for the total or even the majority of team members. The team learning literature has not conclusively indicated if all members need to engage in the acquisition of knowledge for a team to learn (Watkins & Marsick, 1990; Dechant, Marsick & Kasl, 1993; Watkins & Marsick, 1993).

Given these findings we suggest that a more appropriate linking mechanism from individual to organizational learning is team sensemaking: collectives interpret previous events to create reality with which they operate as fact (Weick, 1995). As individuals they need not accept this reality; however, they accept it in the collective endeavor.[3]

Model of Team Sensemaking. Maintaining the connection with living systems theory, this model can be visualized as the classic double helix (or DNA). As DNA is the building block of life, so communicative collective learning can be considered a building block for survival (Maturana & Varela, 1980). Intertwining strands of individual and collective learning form the backbone of our model. These strands are linked by team sensemaking which provides the unique identity of learning at all levels.

Exploratory Study

As we were conducting our literature review for our collective knowledge acquisition model we were also engaged in a two year exploratory study to examine the developmental relations which occur throughout a cohort experience Specifically, we were examining the exchanges and interactions over time with two or more people which result in personal or professional growth. We decided to do an in-depth qualitative study to understand the cohort experience, a popular education structure in management development programs and professional education and business schools.

The cohort consisted of 15 students in a two year weekend master's degree program in human resource development. Participation in the study was strictly voluntary. All fifteen cohort members agreed to have researchers observe their class sessions. Ten of the cohort members contracted to have additional data collected on them, including end of semester interviews, written class materials, questionnaires and group interviews.

Our analysis was open-ended with the rubric of developmental relationships. The semester interviews were semi-structured and began to demonstrate evidence of team sensemaking as integral to the process of collective learning. Throughout the data collection we conducted ongoing data analysis following a grounded theory framework (Glasser and Strauss, 1967). The cohort demonstrated evidence of collective learning by demonstrating insight into

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[3] This paper specifies that team learning may be the link between individual and organizational learning in certain contexts. However, team sensemaking may capture the linking process in situations where team dynamics prohibit collective reflection and inquiry.

conceptual and process areas, and the performance of procedures, rules, and routines. Subgroups indicated an institutionalization of learning mechanisms, not knowledge acquisition related to the content area (Glynn, Milliken & Lant, 1991 p.7).

Implications

The team sensemaking model developed indicates that insights into organizational and individual level learning can be research through longitudinal narrative analysis of critical incidents (Martin, Feldman, Hatch, and Sitkin, 1983). The purpose of this methodology is to understand the interviewee's perspective on what the incident meant and how it relates to other experiences (McClure, 1989).

Narratives can be analyzed for similarities and differences between and among individuals and subgroups according to the structure, meaning, and emotion attached to the event and critical actors identified as most influential in determining the accepted collective understanding of a critical incident. For on-going analysis these patterns can then be correlated with:

- demographic data to determine group differences in collective sensemaking;
- organizational duration to determine the effect of length of interaction on the prevalence of collective sensemaking (Gioia and Chittipeddi, 1991); and
- performance to determine individual (or subgroup) acceptance of the collective paradigm and their performance in the collective (Bougon, Weick, & Binkhorst, 1977).

Practitioners have been interested in the development of contexts to promote collective learning experiences (Senge, Kleiner, Roberts, Ross & Smith, 1994). This review of literature and exploratory study indicate that sensemaking may be critical in organizational and individual learning. The extensive research completed on sensemaking gives direction into the mechanisms that encourage organizational members to possess a *mindset for sensemaking* (Weick, 1995 p.191). Some mindset development mechanisms explicated include: encouraging the use and sharing of members life stories and experiences, the search for and sharing of ideas and situations that fascinate, and the acceptance of meaning-making and understanding as an on-going process.

Team sensemaking may be the process which links individual and organizational learning. This article begins to reveal the potentiality of team sensemaking as a model for individual and organizational learning. The exploratory study currently underway marks an initial attempt to understand the process and highlight it for practical application and further research.

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The Subject and the Learning Organization

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The implementation of organizational changes along with the principles of "the learning organisation" has not been very well analysed. This Danish project follows the development in five cases and is especially looking at the consequences for the individual employee - what happens in the process, what are the main barriers/supports for real progress in the workplace?

"The learning organization" is a metaphorical attempt to grasp both the individual side and the organizational side of development in workplaces and companies. To get a better understanding of this it is essential to understand the individual and subjective side of the process.

The whole "theory" of the learning organization is very weak in its theoretical basis, and this weakness is very clear in the discussion of the relation between structure and individual/subject.

The project "KOLORIT" - Kompetency, learning organization and information technology - is dealing with this. The project draws upon critical theory, - primarily based in sociopsychology and psychoanalysis, and different theoretical approaches to organizational development. Theories that are capable of discussion the subject as a psychodynamic structure in the power and resistance relations (Knights and Willmot,) in the workplace. This forms a basis for a critical approach to the modern management concepts like "the learning organization" (without excluding the knowledge and insight about modern organizations, which also is embedded in these concepts).

The theoretical approach is combined with activities with living people - empirical research in companies. The project is action oriented, based on close links to a trade union that wants to have more practical advice on what their members have to do, to keep up with the development in the enterprises, and how to ensure the members personal interests in the process of modernisation.

Research Questions/Hypotheses

The theory will try to deal with changes in the workplace from the "learning process"-perspective - linking experiences, cognitive structure, environmental aspects, etc. to the actual process developing the individual and the "learning organization".

In the project we look in to these processes from the point of the subject, the individual employee, and follow this perspective in the process in the enterprises, as well in the research project.

Some of the questions that the project tries to deal with are

How do different personal/employee strategies interfere with the organizations/management strategies? We have a broad knowledge of the reasons for the organizations, the companies to seek new capacities, new knowledge, new forms of organization, etc. and to some degree also what types of management strategies that this is formed into - but we have very little knowledge about the structure and the content of the reasoning, reflexion by the individual employee and the "individual strategies" this is formed into. Following this we find it interesting to See how these different strategies interact in the actual practise in the workplace - how can this strategies support each other, how can they become contradictory, etc.?

How does the organizational environment - especially the use of technology and the work organization - influence on the personal development in the companies? Though we have a general understanding of some of the contemporary developments in organizations there still is many questions in the relation between the general technology- and management concepts and the specific response inside a given company. What are the main relations between specific possibilities in a technical and organizational sense and specific strategical choices made by management resp. employees?

Even though we have the subject as our primary point of focus there is still a very interesting aspect

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in the cooperation and in the actual group of employees, the colleges, in the workplace. There will very often be a very large element of collective practice in a workplace and how is this influenced by and how does this influence the development of the individual employee?

Research Method

The project consists of both a theoretical discussion about the literature and a field study in five companies.

The theoretical part will try to rethink and to some degree make a conglomerate of traditional sociological theories - for instance inspiration from Giddens (Giddens (1984)) and his theory of structuration - as a way to think employees as actors; of recent British industrial sociology based on Foucault theories of Power and Resistance - see for instance Knights and Vurdubakis (1994), and of theories of the subject and learning processes developed in the critical theory tradition (see among others .....).

With this as a theoretical basis we critically review some of the contemporary "theories" or "concepts" that are normally the frames of discussions of HRD-projects in Denmark. As part of this we have made a critical reading of Peter Senges work (...) and as an example of this kind of critical reading I have a summary of this critique later in this paper.

The empirical part of the project will be based on five case studies - based among others on the metho logical discussion of case studies by Yin (1993). The sample of cases has been made from different criteria:

It has to be manufacturing or companies servicing manufacturing companies because we think that the sector will have very heavy influence on the research questions raised in this project. We also want companies where the accessibility to he organization - both management and employees - is very good. And we want to look especially at non-academic technical and administrative staff. This is obviously based in the fact that our sponsor has this specific interest, but also in a point of view that different kind of employee will experience this questions very differently - based on their position in the company and the characteristics of their tasks, competencies, skills, etc.. This has lead to case studies in four Danish and one Greenlandic company.

The field studies will be based on three types of data: the "basic facts" (org. charts, procedures, etc.); interviews and observations in special departments in the companies (R&D, sales, or other white-collar areas).

Based on these data we are analysing the questions mentioned above. This will lead to the creation of a model of the process in the specific company. A model that will be discussed with the management and the employees in the company.

Finally we will compare and discuss the five cases in relation to the research questions.

A Critical Reading of Senge

But as an example of our approach to the area of the learning organization I have made a resume of our critical reading of Peter Senge. As mentioned this is not the only critical reading of contemporary "concepts" in HRD practices in Denmark, but probably the most interesting for an international audience. Peter Senges work on "the learning organization" has not been translated into Danish, but his concept as such in a very broad understanding has been imported - primarily thru consulting companies and a few books the refers to Senge.

The reading has resulted in two parts - a critique of some of Senges concepts from the Danish perspective, and an input to the design of the rest of the research project based on these reflexions. I won't go in details with the many specific ideas of different kinds by Peter Senge. But shortly recapture the conclusion: We see basically "The fifth discipline" as a big and idealistic enlightment-project. If we learn to think more and in a better way - with the fifth discipline - we will be able to solve and remove conflicts and obstacles to our development. The reflexion of the (very different) kinds of work as such is not part of the books, and it is a very abstract idea that all kinds of jobs give this enormous opportunities to the employees?

And some of the basic assumptions are generally very abstract and without substantial social

reference . Is this emphasis on the personal engagement in the work and the workplace realistic as a common feature - won't there be contradictions to the demand for flexibility, problems with all the mergers and acquisitions in the economy today, etc.? And there is a total lack of discussion about power and power relations - whether it's power based in economical structures, knowledge, organization or technology.

Senges descriptions about learning are very phenomenological and when they are linked to subjective structures it's primarily cognitive elements. But what is really going on in these processes - and how is this processes of learning supported or restricted by the power-structures as mentioned above?

What could be seen as Senges most original contribution - the focus on systems thinking and systems theory - is (interesting enough) the part that has had the least importance in a Danish context. In the Danish debate it has been an publication from the EU Commission (Stahl et al 1993) that has had most influence on how the "learning organization" has been interpreted. And that has mostly been from four key-aspects: - that companies should think employees and qualifications as strategical issues in the planning, - that informal learning and training should have more acknowledgement, - that we have to develop new form of cooperation between educational institutions and the workplaces, - and finally that we have to have an holistic approach to organizations.

Why is Senge interesting in a Danish context?

The work with Senges concepts of the fifth discipline is interesting and productive in more than one aspect:

First of all is it interesting as an ideology , a part of contemporary management culture. Senges very critical approach to actual aspects of traditional management; his focus on the human factor, the critique of pure economically and profit driven enterprises are an interesting influence on actual management debates. It is a very explicit and reflective example of the actual problems with legitimation of the present economic order (the liberal, market driven economy)

Secondly there is - maybe based in some common critical point of views - an interesting parallel to many of the ideas in the Scandinavian trade unions and their strategy of "the developing work". And I think Senge has a basic ethical standard - he operates on a clear and open basis, and he has a progressive view of the human side. If the consultants, that work on this basis, would live up to this standard they could do a really good job and be worth the trust by the employees. See the discussion of these aspects in management consultancy in Volmerg 1993.

Thirdly there is no doubt about the usefulness of some of the partial ideas, tools and solutions that Senge and based on Senge has been worked out. They can work in the actual workplace even they might not have a very explicit theoretical background

And final I think that Systems theory and its implementation on organizational process has to be discussed and research deeper. There are at least two dimensions in these further investigation into systems theory as I see it - is it an enlightening and pedagogical sound instrument for description of the workplace processes and/or is it "the real theory " - of independent, epistemological value?

In the further development of the KOLORIT-project we will go on with these questions in Senges work.

Discussion

I will briefly discuss some of the questions that the project has raised so far - through the critical readings and the planning of the empirical parts of the project:

There is a need for further developing the tools to describe the workplace as frame or room for individual development. The contributions from Brache and Rummler 1990 and Swansson 1994 can be used in this context - as well as some of the elements from systems theory in Senge 1990. As mentioned I think that we generally should find out what the validity of systems theory is - can it for instance grasp some of the hidden structures that a long tradition of organizations based on a marketeconomy and the alienated work?

A central issue is to see how we can relate the subjective dynamics to the organizational dynamics. In the broad market of psychological theories as well as theories of personel development, it is very few

that relates specifically to this dynamics in organizations. And this dynamic has to be seen on the broader background of changes in socialization and the social relations in current society

How should we treat management questions - both relating to the actual management and to the perspectives of a more participatory and democratic development in the companies?

Conclusions:

Process of learning as central key in the development of the civilizational aspect of mode of production. In many ways you could say that Senges point is, that it is possible to find totally new ways of work and new forms of conscious - and that you can blow away some of the current restrictions in labour organization. Even that you might not share his optimism is this civilisationally aspect of the relation between subject learning and work interesting.

The KOLORIT-project will run until mid-1997, and the first results from the empirical studies wont be there before end 1996, so it's obviously to early to mention any conclusions or final results so far. But as an idea of a model to carry out research dealing with the subject in this kind of processes it has already proven it's value. As a core HRD-concept - to look at the subject and into the learning processes - and by that not only professionally to "Resources" and "Development", - it is also able to involve, understand and respect the "Human" part of HRD.

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Validation of a Transfer Climate Instrument

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Rouiller and Goldstein (1993) proposed an eight factor structure for a transfer climate instruments but were unable to validate the structure due to inadequate sample size. This study attempted to validate their hypothesized structure. A substantially different factor structure was found suggesting a different direction for transfer climate instrument research. Results suggest trainees perceive climate more according to referent in the organization rather than the psychological cues proposed.

Investment in training activities aimed at improving employees' job performance represents a huge financial expenditure in the United States. It has been conservatively estimated that at least $100 billion is spent by US employers annually on training and development interventions. Of this expenditure, as little as 10% is projected to pay off in performance improvements resulting from the transfer of learned knowledge, skills, and abilities to the job (Baldwin & Ford, 1988). Indeed, it has been projected that the 'transfer problem' is so pervasive that there is rarely a learning-performance situation in which such a problem does not exist (Broad & Newstrom, 1992).

Transfer of training can be defined as the degree to which trainees apply the knowledge, skills, behaviors, and attitudes learned in training to their jobs. Transfer of training is seen as a function of factors in the formal training environment designed to facilitate transfer such as training content or design factors (Noe, 1986) as well as factors in the work environment (Tannenbaum & Yukl, 1992). Although a good deal of research has been done on design factors, significantly less has been done to understand how work environment factors influence transfer of training (Baldwin & Ford, 1988).

One conceptualization of the manner in which work environment factors affect the transfer of learned behaviors to the job is through a transfer of training climate. The construct of transfer climate is seen as a mediating variable in the relationship between the organizational context and an individual's job attitudes and work behavior. Thus, even when learning occurs in training, the transfer climate may either support or inhibit the application of learned behaviors on the job (Mathieu, Tannenbaum, & Salas, 1992).

Several studies have established that transfer climate can significantly affect an individual's ability and motivation to transfer learning to job performance (Rouiller & Goldstein, 1993; Tracey, Tannenbaum, & Kavanaugh, 1995) These findings have led an increasing concern about how to operationalize and measure the construct validly and reliably. The purpose of this study is to move toward the goal of a general transfer climate instrument by validating the transfer climate constructs and instrument proposed by Rouiller and Goldstein (1993).

Current Transfer Climate Research

From a practical perspective, measuring transfer of training climate is important because it helps HRD move beyond the question of whether training works to why training works (Tannenbaum & Yukl,

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1992). From an HRD evaluation perspective, without controlling for the influence of transfer climate, evaluation results are likely to vary considerably and yield erroneous conclusions about the causes of intervention outcomes (Holton, 1995). A valid and reliable measure of transfer climate is also important because such an instrument can identify when an organization is ready for a training intervention and it can provide information to guide pretraining interventions aimed at increasing training effectiveness. From a theoretical perspective, identifying and measuring the dimensions of the work context that impact the use of learned skills and behaviors provides a more complete conceptual framework of training effectiveness.

There are several critical assumptions that accompany the use of climate as a variable in explaining the transfer of training. First, climate, as a general construct, is defined as a psychologically meaningful description of the work environment (James & Jones, 1974; Jones & James, 1979). This conceptualization specifies that transfer climate is not the work environment per se nor the way people respond to it. Rather, it is the interpretative or "perceptual medium" (Kopelman, Brief, & Guzzo, 1990) through which the work environment affects job attitudes and behaviors. Transfer climate can thus be described as a "sense of imperative" (Schneider & Rentsch, 1988) arising from a person's perceptions of the work environment which influences the extent to which he or she is able to apply and utilize learned skills on the job. This cognitively based, individual level variable is assumed to be generalizable across organizational groups and units based on (1) the similarity of objective structural characteristics from unit to unit or group to group within an organization; (2) the selection, attraction, and attrition of organizational members (see Schneider, 1987); and (3) the shared meaning which develops out of the social interaction of organizational members (Schneider & Reichers, 1983). These factors arguably justify the aggregation of transfer climate data for the purposes of analysis at other levels such as group, unit or organizational levels (James, Jones, & Ashe, 1990). Finally, it is assumed that there are a limited number of factors that comprise the transfer climate construct and that, within these factors, there are reliable differences in specific climate factors (e.g., social support) across organizational units as well as across organizations.

Rouiller and Goldstein (1993), following Rouiller (1989), offered a conceptual framework based on Luthans and Kreitner's (1985) organizational behavior modification model for operationalizing the transfer climate construct. These authors proposed that transfer climate consisted of two general types of workplace cues comprising eight distinct dimensions of transfer climate (see Exhibit 1). The first set of workplace cues, situational cues, serve to remind or provide the opportunity for trainees to use what they have learned on the job. Situational cues were proposed to have four dimensions: (1) Goal cues (2) social cues (3) task cues and (4) self-control cues. The second set of workplace cues, consequence cues, refer to on the job outcomes which affect the extent to which training is transferred. Consequence cues were also presumed to have four dimensions: (1) positive feedback (2) negative feedback (3) punishment and (4) no feedback.

Exhibit 1. Definitions of Transfer Climate Constructs (Rouiller & Goldstein, 1993, p. 383)

Situational cues Cues that serve to remind trainees of their training or provide them with an opportunity to use their training once they return to their jobs.

> ***Goal cues***. These cues serve to remind trainees to use their training when they return to their jobs; for example, existing managers set goals for new managers that encourage them to apply their training on the job.
>
> ***Social cues.*** These cues arise from group membership and include the behavior and influence processes exhibited by supervisors, peers and/or subordinates; for example, new managers who use their training supervise differently from the existing managers. (This is reverse-scored.)
>
> ***Task cues***. These cues concern the design and nature of the job itself; for example, equipment is available in this unit that allows new managers to use the skills they gained in training.

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Self-control cues. These cues concern various self-control processes that permit trainees to use what has been learned; for example, "I was allowed to practice handling real and job-relevant problems."

Consequences. As employees return to their jobs and begin applying their learned behavior, they will encounter consequences that will affect their further use of what they have learned. A number of different types of consequences exist.

Positive feedback. In this instance, the trainees are given positive information about their use of the trained behavior; for example, new managers who successfully use their training will receive a salary increase.

Negative feedback. Here, trainees are informed of the negative consequences of not using their learned behavior; for example, area managers are made aware of new managers who are not following operating procedures.

Punishment. Trainees are punished for using trained behaviors; for example, more experienced workers ridicule the use of techniques learned in training. (This is reverse-scored.)

No feedback. No information is given to the trainees about the use or importance of the learned behavior; for example, existing managers are too busy to note whether trainees use learned behavior. (This is reverse-scored.)

In a study of fast food restaurant management trainees, Rouiller & Goldstein (1993) used this hypothetical framework and demonstrated that aggregated unit level perceptions of transfer climate added significantly to the explained variance in posttraining job performance after controlling for learning and unit performance. In a multiple regression analysis, learning accounted for 8% of the variance in transfer behavior, but learning and transfer climate together accounted for 54% of the variance. The two sets of workplace cues, situational and consequence cues, were each found to add significantly to the explained unique variance. However, the authors did not test the factor structure of the scales. Their study derived the scales based on expert judgements, not factor analysis. Thus the only data reported were the within group interrater agreement estimates. In short, this study did not validate the proposed dimensions or subscales in the transfer climate construct.

Tracey et al. (1995), following Tracey (1992), attempted to replicate and extend the work of Rouiller and Goldstein (1993) using items drawn from their instrument along with an additional dimension of the work context termed continuous learning culture. This study of the transfer of training behavior of managers in a supermarket chain used 33 of the items from Rouiller & Goldstein's transfer climate instrument in addition to 24 items designed to measure continuous learning culture. These authors did not include Rouiller & Goldstein's hypothesized self-control scale in their instrument, reasoning that it was not a measure of transfer climate because the scale referred to "personal experiences relating to the use of training on the job, rather than perceptions about the transfer of training climate" (Tracey, 1992, p. 69).

A series of LISREL analyses revealed that both the climate and culture constructs explained a significant amount of variance in posttraining job behavior. A confirmatory factor analysis yielded a two factor model with six transfer climate scales factoring into a single scale and three proposed continuous learning culture scales factoring to a single scale. An exploratory factor analysis conducted by Tracey (1992) to clarify the underlying factor structure of both the climate and culture constructs retained nine interpretable factors. The transfer climate scales produced by this analysis were similar in some respects, but not identical, to those proposed by Rouiller and Goldstein (1993). As Tracey et al. (1995) noted, this is not surprising based on the different analytical methods used in scale derivation in the two studies.

Taken together these studies make it difficult to determine with any certainty the degree to which the transfer climate constructs and corresponding scales hypothesized by Rouiller and Goldstein are valid. Nevertheless, these results strongly indicate the presence of an interpretable transfer climate structure suggesting the need for further research to establish and clarify the nature of that structure.

Method

This study was conducted as part of a larger evaluation study of a computer-based training program implemented to deliver OSHA mandated plant operator training. A variety of instruments were administered to participants, including the transfer climate instrument reported on here.

Sample The participants in the study included 189 operating technicians from four production units at a petrochemical manufacturing facility.

Measures Transfer climate was assessed using an instrument containing 48 items developed by Rouiller and Goldstein (1993) to represent the eight proposed dimensions. Because the items were not included in their article, we contacted the authors directly to obtain the items. Their original instrument contained 63 items but fifteen items were eliminated in this study because they were not appropriate for this organization. Seven of those eliminated were "self-control" items because this training was for operational procedures that were written by the trainees and for which application was not optional. Three items were also dropped from the social cue set and three from the negative feedback set. In the final instrument the number of items per scale ranged from 2 (negative feedback) to 17 (social cues). All items used a five point Likert type scale ranging from strongly disagree (1) to strongly agree (5). The items were used verbatim where possible but some were revised as needed to reflect appropriate terminology for the organization and the type of training being conducted. The changes did not alter the underlying constructs measured by the items.

Analysis Exploratory common factor analysis was conducted to identify the underlying latent structure of the data. Common factor analysis is more appropriate than principal components analysis when the objective of the analysis is to identify latent structures, rather than for predictive purposes (Nunnally & Bernstein, 1994). An oblique rotation was used because it is also more appropriate for latent variable investigation when latent variables are expected to have some correlation.

Results

Kaiser's measure of sampling adequacy (MSA), a measure of the data set's appropriateness for factor analysis, was .905. Values above .90 are considered very appropriate for factor analysis (Hair, Anderson, Tatham, & Black, 1995). Six factors emerged with eigen values greater than one, explaining 81.6% of the variance. Of the 48 items on the instrument, 40 loaded .40 or higher on these six factors and were retained for further analysis. This is a conservative cutoff for factor loadings and more items could have been retained if the cutoff had been .30. However, reliability analysis including items loading slightly below .40 showed that the reliability would be reduced by including them. One item had an MSA in the unacceptable range and was dropped from further analysis, leaving 7 items that did not load on any factor.

Loadings reported in Table 1 were characterized by interpretable simple structures. Importantly, items yielded exceptionally clean loadings with average loading greater than .50 on the major factor and less than .20 on all factors for all scales. We further examined the stability of the factor structure across different factor analysis methods. The factor structure was identical when the common factor analysis was repeated with an orthogonal (varimax) rotation.

Analysis of the item content and the original proposed theoretical framework led to the six factors being identified as shown in Table 1. They are: supervisor support, transfer design, peer/job support, supervisor sanction, personal outcomes-positive, personal outcomes-negative.

Table 1 Factor Loadings for transfer climate items

Item Number	1	2	3	4	5	6
Supervisor Support (avg. loading, major factor = .613; other factors = .111)						
12	.81	.04	.02	.13	-.11	-.10
8	.77	.02	-.04	.07	.03	.15
27	.75	-.14	.20	.03	.07	-.14
4	.73	.15	-.16	.08	.13	-.02
1	.73	.04	-.12	.10	.10	.11
15	.72	-.18	.33	-.06	-.08	-.11
13	.71	.08	-.03	-.08	-.10	.06
2	.69	.15	-.20	.02	.19	.01
14	.60	.00	.18	.07	.06	-.01
11	.59	.18	.06	-.18	-.25	-.01
26	.55	-.12	-.12	-.16	.01	.30
5	.54	.28	-.19	-.03	.06	.00
10	.53	.05	-.09	-.22	-.08	.27
9	.50	.16	.01	.00	-.06	.19
23	.49	-.07	.30	.13	-.15	.17
24	.48	-.05	.13	-.07	.27	-.05
38	.46	.04	.24	-.01	.11	.13
16	.41	-.10	.23	-.33	.00	.11
Transfer Design (avg. loading, major factor = .694; other factors = .088)						
64	.03	.79	-.05	.02	-.03	-.29
63	.08	.70	.19	-.02	-.08	.04
66	.07	.69	.15	.05	.06	-.07
65	.19	.65	.23	.06	.03	-.09
62	.16	.64	.13	.03	.01	.03
Peer/Task Support (avg. loading, major factor = .474; other factors = .136)						
31	-.03	.15	.53	-.18	.14	.08
37	.18	.19	.51	.02	-.13	.04
30	-.10	.08	.46	-.22	.17	.16
41	-.10	.24	.44	-.11	.05	.19
36	.23	.12	.43	-.02	.21	-.15
44	-.07	.38	.43	.20	.08	.23
55	.02	.00	-.48	.21	.23	-.11
45	.09	-.24	-.51	-.15	-.01	-.15
Supervisor Sanction (avg. loading, major factor = .560; other factors = .084)						
18	.08	.05	.01	.63	.00	.03
21	-.21	-.06	-.11	.59	-.02	.07
29	.00	.08	-.20	.56	.02	.18
22	-.26	.01	-.16	.46	-.05	.08
Personal Outcomes - Positive (avg. loading, major factor = .583; other factors = .071)						
52	.05	.01	-.02	-.12	.69	-.01
51	.06	-.02	-.01	.15	.68	.04
59	.10	-.19	-.12	.10	.38	.06
Personal Outcomes - Negative (avg .loading major factor = .595; other factors = .145)						
54	.04	-.02	.16	.15	-.05	.63
53	.22	-.24	.20	.17	.20	.56
EIGENVALUES	14.691	2.689	1.762	1.408	1.0773	1.000
% VARIANCE EXPLAINED	54.01	9.89	6.48	5.17	3.96	3.68

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Table 2 contains means, standard deviations, and internal consistency reliability estimates for unit weighted combinations of items loading dominantly on each factor. Five of the six scales exceeded Nunnally & Bernstein's (1994) suggested minimum reliability of at least .70 for instruments in early stages of development, with an average alpha of .78.

Table 2 - Descriptive statistics for scales

Scale	# Items	Alpha	Mean	SD
Supervisor Support	18	.94	3.46	.60
Job/Peer Support	8	.81	3.56	.58
Supervisor Sanction (reversed)	4	.73	3.64	.69
Personal outcomes-positive	3	.70	3.07	.82
Personal outcomes-negative (reversed)	2	.67	3.05	.84
Transfer Design	5	.88	3.70	.61

Discussion

Rouillier and Goldstein's hypothesized structure of transfer constructs was generally not supported. Their structure suggested that people perceive transfer climate by psychological cues (i.e. goal cues, social cues, etc.). This analysis suggests that they perceive climate according to the referent of the climate (supervisor, peer/task, or self). Exhibit 2 illustrates conceptually how items loaded in this analysis. If Rouiller and Goldstein's structure were supported, the highlighted blocks would be horizontal by row. Instead the items loaded by referent, suggesting that climate perceptions are structured by whether the construct pertains to their supervisor, their peer/task, or themselves.

Exhibit 2 - Conceptual factor structure

Construct	Referent/Num Items			
	Supervisor	Peer/Task	Self	Not load
CLIMATE				
Goal	3	1		1
Social	12	2		3
Task		3		1
Positive Feedback	3	1	2	0
No Feedback	2		1	0
Punishment	2	1		2
Negative Feedback			2	0
TRANSFER DESIGN (Self-control)	5			0

Even the macro structure of "situational" cues and "consequences" proposed by Rouiller and Goldstein is called into question by this analysis. For items referring to supervisors, "positive feedback" items loaded with goal and social cues, indicating that they were not perceived as a consequence, but rather as another form of support. Items referring to negative supervisor consequences did load together. Items referring to the immediate work environment (peers and task) all loaded together, indicating respondents perceived no distinction between situational cues and consequences. Items that were self-referent loaded into two factors reflecting positive and negative consequences. Thus, one can not conclude from this analysis that the macro structure is valid.

The only set of items that loaded as expected were the self-control items. However, we agree with Tracy (1992) that these are not really climate items. The self-control cue items address the extent to which the training enables trainees to transfer learning to the job. What these items really measure is the adequacy of the training design, which has been labeled "transfer design" (Holton, 1996). This is a very important construct which assesses the degree to which training gives the trainee the ability to transfer learning, but it is not a part of the transfer climate.

This analysis suggests the following constructs:

Transfer Climate

- *Supervisor support* The extent to which supervisors reinforce and support use of learning on the job. Examples include setting goals to use learning, giving assistance, offering positive feedback.
- *Peer/task support* The extent to which peers and the task itself reinforce and support use of learning on the job. Examples include setting goals to use learning, giving assistance, offering positive feedback, and having similar equipment as used in training..
- *Supervisor sanctions* Negative responses of the supervisor if training is not used on the job. These may include negative feedback, punishment, and no feedback at all.
- *Personal outcomes - positive* The degree to which applying training on the job leads to outcomes that are positive payoffs for the individual. These may include raises, advancement, etc.
- *Personal outcomes - negative* The degree to which applying training on the job leads to outcomes that are negative for the individual. These may include reprimands, being overlooked for raises, etc.

Transfer Design

The extent to which training has been designed to give trainees the ability to transfer learning to job application and the training instructions match the job requirements. This may include designs that include practice, experiential activities, and real world requirements.

One possible limitation of this study is the fact that a number of items were dropped from Rouiller and Goldstein's original instrument which precludes drawing general conclusions about all of their scales. However, these results suggest a very different conceptual structure for transfer climate measurement which we believe was not affected by the items dropped. Their instrument development process was also built on deriving climate items that were appropriate for the organization in their study. Climate instruments will likely always require some modification across organizations. The next research step should be to further refine the item set for these constructs and then conduct criterion validity studies.

We suggest though that an important goal for transfer researchers should be the identification of generic transfer constructs present in every training situation and the development of accepted procedures for constructing appropriate items to assess those constructs. Without that, cross study analysis will be very difficult. Currently, various conclusions are being drawn in studies about the importance of transfer climate while using a variety of instruments of varying quality. Serious research is needed to develop the psychometric integrity of transfer instruments before more definitive conclusions about the relationship of transfer climate to individual performance outcomes are possible.

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Transfer of Training in Corporate Setting: Testing a Model

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In the field of HRD transfer of training is of particular interest because of its link with training effectiveness. In general, three categories of transfer influencing factors are distinguished: characteristics of trainee, training design, and work environment. Based on a review of existing research a new transfer of training model is developed. This model contains the major influencing factors and their relation with learning and performance. The transfer of training model is tested in a corporate setting. Results indicate that trainee's self-efficacy and the supervisory support are important factors.

The importance of training effectiveness is frequently stressed in the field of human resource development. Training is considered to be effective when trainees can apply their learning to their work situations, and consequently, when their performance on the job improves. However, training appears not to be as effective as is desired or needed. Broad and Newstrom (1992, p. ix) stated, for example, that most of the investments in training and development is wasted because most of the knowledge and skills gained in training (well over 80 percent by some estimates) are not fully applied by those employees on the job. Baldwin and Ford (1988, p. 63) stated that 10 percent or less of expenditure on training actually results in transfer to the work environment.

In general the lack of transfer of training is seen as the main cause for these losses. Transfer of training is referred to as the degree to which trainees effectively apply knowledge, skills, and attitudes, gained in a training context, to the work situation. This definition has three implications. Firstly, it implies that there is something to transfer: the knowledge, skills, and attitudes gained in a training context. In other words, learning must have occurred. Secondly, the trainee should be both able and motivated to transfer the training. Finally, there is the situation, different from the training context, in which the training content is applied. In other words, there are a lot of factors that may influence transfer of training (and therefore performance) positively or negatively. The focus of this study was to identify and test the effects of these influencing factors.

Method

Available literature on the influencing factors in training design, trainee, and work environment was reviewed. A particular effort was made to explore research conducted in a corporate setting, which used vocational or professional oriented training programs. Based on this empirical material a transfer of training model was constructed, in which the most important influencing factors in trainee and work environment and their relations with learning and performance were presented (see Figure 1).

Then the validity of the transfer of training model was examined in a corporate setting provided by a large international Dutch banking organization. A program for computer assisted instruction for desk clerks concerning 'Legal Aspects' was selected. It consisted of a computer program and a textbook, and was concluded with an (optional) examination provided by the training department. The affiliated banks purchased the training material from the training department. The individual banks decided on how and when to use the training programs, as no strict guidelines were offered by the training department.

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Data on the variables in the model were collected by means of four observations taken before the training (O1), immediately after the training (O2), approximately one month after the training (O3), and approximately three months after training (O4). The instruments used to collect the data, consisted of questionnaires and tests, and a log. The questionnaires, the log and the transfer test were designed, tested and revised for this study. For the pretest and posttest the tests designed by the bank's training department were used.

Two groups of respondents were established: one group received all measurements, while the other group (the comparison group) only received a selection. The trainee's supervisor also completed a questionnaire, which coincided with the last observation for the desk clerks. The sample consisted of 112 respondents: 75 in the so called treatment group, 37 in the comparison group. The collected data were analyzed by means of methods of multiple regression analysis and intercorrelation.

The potential weaknesses of the design were investigated and it was concluded that the collected data were internally valid. Additionally, the reliability of the various variables incorporated in the questionnaires were examined, and were in general found to be satisfactory. Finally, the two groups in the sample were compared with no systematic differences being found. The sample was also found to be representative for the population of desk clerks.

The Transfer of Training Model

The model presented here is the result of an effort to synthesize pieces of empirical evidence into a more comprehensive view on the transfer of training process in the context of corporate training. In the transfer of training model (see Figure 1) the influencing trainee characteristics and work environment characteristics have been incorporated.

Trainee Characteristics. In general, trainee characteristics appear to influence behavioral change, although Baldwin and Ford (1988) have stated that the extent and direction is not agreed upon and although characteristics are being examined separately. For the purpose of this study the trainee characteristics that appear to have the most influence on the transfer of training process have been selected.

Ability. It is apparent that an individual's ability determines a vast amount of the variance in learning outcomes. Not only the accumulated skills from past experience with similar tasks (prior knowledge), but also the flexible adaptation of skills to a novel learning task (Clark & Voogel, 1985) are considered.

Self-efficacy and Learning Style. Personality factors that seem important are self-efficacy and learning style. Self-efficacy is defined as 'the individual's expectation or confidence that tasks can be successfully performed' (Ford, Quinones, Sego, & Speer Sorra, 1992). The underlying hypotheses are that individuals high in self-efficacy are more likely to be active in trying out trained tasks and attempting more difficult and complex tasks on the job (Ford et al., 1992) and that there is a positive relation between self-efficacy and perceived frequency of use of skills (Ameel, 1992, p. 72).

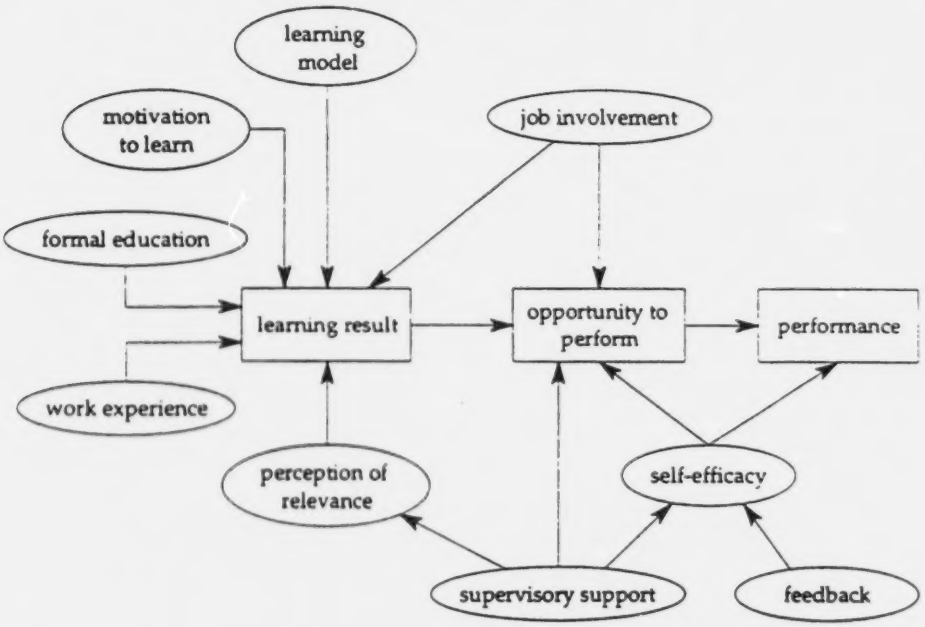
Learning style is the composition of learning activities, orientation toward learning and the mental model of learning that an individual possesses (compare Vermunt, 1992). Together these aspects appear to determine a large part of test results.

Job involvement and Perception of Relevance. Important motivational factors are job involvement and perception of relevance. *Job involvement* is defined as 'the degree to which the trainee identifies psychologically with the work, or the importance of the work for the individual's total self image' (Noe, 1986, p. 742). Hypotheses indicate that job involvement is positively correlated with learning (the amount of acquired knowledge), and with frequency of training use and through this indirectly with behavior change. Besides, it is critical to explain the relevance of the task to be mastered to the trainees' current jobs or future employment opportunities (Ameel, 1992, p. 40).

If the trainee does not have an accurate perception of the training's relevance it is probable that he will not learn to do anything he could usefully do on the job. Therefore it is

expected that the trainee's perception of relevance of the training content is related to the so-called motivation to learn (before the training program) and the motivation to transfer (after finishing the training program). In the first instance the perception of relevance is probably based on information on the training content provided by the training department, supervisor, and colleagues. In the second instance it will stem from first hand experience in the training program and the trainee's opinion of its relevance for the actual job. Perception of relevance is hypothesized to have a positive correlation with learning and with the frequency of training use.

Figure 1. The transfer of training model



Work Environment Characteristics. The work environment comprises all of the conditions in which an employee has to perform the tasks and duties belonging to his or her function. Within this environment certain variables influence either positively or negatively the individual's capacity to transfer training to the workplace. The most important influencing factors are derived from the relation between the trainee and his or her supervisor. Here important factors are supervisory support, feedback and opportunity to perform.

Supervisory Support. The perception of the supervisory support is determined by the activities the supervisor performs before, during and after the training program. The amount of support influences the trainee's perception of the importance of the training program and of the supervisor's trust in the trainee's ability to perform. In turn, the trainee's perception of relevance is effected and an actual effort to transfer is made (motivation to transfer). Furthermore, there appeared to be a link between supervisory support and the frequency of training use.

Feedback. From the research on the influence of feedback it was concluded that feedback from supervisory and organizational sources was related to reported job performance while feedback from peers and self was not. Most of the unique variance in performance explained by feedback was also accounted for by feedback from these sources. Negative expressions or consequences (e.g. no recommendation for a promotion) were related to lower performance, and positive job changes, expressions or formal recognition (e.g. increasing responsibility) were related to higher performance. It is hypothesized that the trainees' perception of the feedback

influences (either positively or negatively) the trainee's self-efficacy and thus indirectly performance on the job.

Opportunity to perform. A final important factor on the transfer of training due to the work environment are the opportunities the trainee encounters to practice the newly learned skills. This opportunity to use or opportunity to perform is defined as the extent to which a trainee is provided with or actively obtains work experiences relevant to the tasks for which he or she is trained (Ford et al., 1992). Issues to consider are, for example, the number of trained tasks the trainee actually performed on the job, the number of times a task is performed, or the overall perception of difficulty and complexity of the performed tasks (in case a trainee happens to perform only the relatively easy tasks). It was concluded that the degree of opportunity to perform was influenced by the supervisor.

Training Design Characteristics. It was concluded that achieving transfer depends on two things. On the one hand the trainee must gain sufficient knowledge of and exercise on a specific task to master it (declarative and procedural knowledge). Training must therefore rely on the crucial elements in the transfer task and train these elements in the learning environment: similarity of tasks. On the other hand the trainee must have sufficient conditional knowledge in order to decide if it is appropriate to apply mastered knowledge and skills. To accomplish this attention must be given to variability of tasks. The bottom line is that training must offer opportunity to both task performance and decontextualization.

Training objectives aiming at near transfer (low-road transfer, automatic processes) or that have a procedural nature ask for knowledge that is context bound. To accomplish this knowledge must be introduced in the context it will be used and behavioral oriented training methods are needed. When training objectives aim at far transfer (high-road transfer, controlled processes) and are of a declarative nature then the students must be stimulated into generalizing and making analogies in order to render knowledge less context-bound (decontextualization). This can be accomplished by offering varied examples and using cognitive oriented training methods.

From the literature examined several assumptions can be formulated about the increase of transfer. Near transfer is promoted by: introducing knowledge in the context it will be used; behavioral objectives that guide instruction, and the presence of identical elements in tasks in training and in job environment promotes transfer. Far transfer is promoted by: introducing varied context, which leads to decontextualization of learning, stimulating generalization and analogies, discovery strategies, and a sequence by increasing diversity, which in turn decreases contextual bindings.

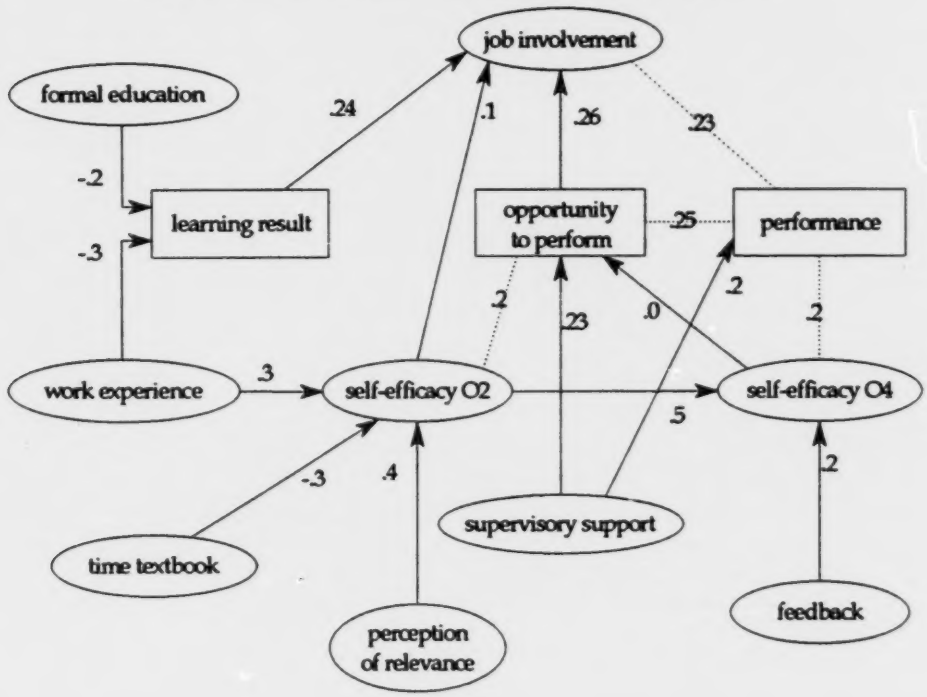
As can be observed no training design characteristics have not been included (yet) in the transfer of training model. The reason for this being the lack of variation in the training design because this study was conducted with one training program.

Results

In the transfer of training model, several relations between trainee characteristics, work environment characteristics and the learning result and performance were hypothesized. In Figure 2 the relations confirmed by means of the analyses of regression and intercorrelations are recapitulated. The straight lines refer to the results from regression analyses and the corresponding Beta-weights, the dashed lines refer to the amount of intercorrelation (r^2).

From Learning Result to Performance. In the model it was hypothesized that the learning result would positively affect opportunity to perform, and in turn, that opportunity to perform would affect performance positively. The data provided no evidence for the confirmation of these hypotheses although opportunity to perform was positively related to performance.

Figure 2 The confirmed relations of the transfer of training model



The limited range in the scores of all three variables may have contributed to the lack of significant results (see also Hastings, 1994, p. 102). First, the learning result did not vary widely because the pretest score was already very high: about 80% of the trainees would have passed the examination criterion used by the bank's training department before entering the training (ceiling effect). Nevertheless, a significant learning result was measured. It was also concluded that the learning result was negatively affected by work experience and formal education, but this was explained by the positive influence these two variables have on the pretest score. Secondly, the score for opportunity to perform didn't vary very much either. This was due to the fact that, in general, the desk clerks are not able to regulate the number of opportunities they encounter in which they can perform the learned behavior, but the client's requests do. And thirdly, the performance assessment by the supervisor didn't show much variability either. All desk clerks have experience in performing these specific tasks, and probably the assessment instrument didn't provide the supervisor with a strong method to distinguish between the desk clerks. If, of course, there were actual differences in performance.

In summary, the desk clerks possessed already substantial work experience, in which they probably learned (on-the-job) how to perform the tasks. Consequently, the work experience influenced the test scores significantly. Nevertheless the hypothesized relations are still expected to occur when trainees do not have a high entrance level. These results are therefore considered as valid for this specific context and not necessarily in other circumstances.

Self-efficacy. The hypotheses that self-efficacy would affect both opportunity to perform and performance were only partially supported by the data. The mutually affecting relationship between self-efficacy and opportunity to perform is a very clear example of the mechanism Taylor, Locke, Lee & Gist (1984, p. 414) referred to: "..self-efficacy is reciprocally related to past performance, i.e., it is both a cause and an effect of performance". The finding that trainee's self-

efficacy immediately after the training was positively affected by work experience, is yet another confirmation of results in other research in which both ability and past performance have consistently been found to be positively related to self-efficacy (Lee & Bobko, 1994, p. 365; Taylor, Locke, Lee & Gist, 1984, p. 405).

Self-efficacy was not found to affect performance, but it was positively related to performance. A similar result was found by various researchers (e.g. Ameel, 1992; Ford, Quinones, Sego & Sorra, 1992). Only one case was found in which self-efficacy was reported to intervene between Type A behavior (involving job involvement, competitiveness) and performance (Taylor et al., 1984, p. 413).

Thus, opportunity to perform affects self-efficacy, and in turn, self-efficacy is positively related to performance. This assertion is analogous to Den Ouden's (1992) conclusion that perceived control is positively related to behavior, when it is supported by an intention to perform. In this study, the employee's behavior is regulated by the clients' requests. Ergo, the opportunity to perform regulates performance instead of the intention to perform (motivation to transfer). The chain of reasoning is therefore as follows: the self-efficacy (perceived control) is related to performance when it is supported by opportunity to perform. The results of this data set validate this assertion to a great extent.

In summary, in this study trainee's self-efficacy is an important variable, maybe more important that the learning result. However, in the preceding section as has already been explained, the lack of significant effect from learning was due to the work experience.

Supervisory Support. Supervisory support was assumed to affect performance through the trainee's self-efficacy. The data showed that the perceived supervisory support affected opportunity to perform and performance, but not the trainee's self-efficacy. This result is not consistent with the assertion of Hastings (1994, p. 11) who reasons that "..since self-efficacy is related to performance, the impact of supervisory support and involvement, and situational constraints in any given context is mediated by the interaction of these variables and the trainee's self-efficacy..". Also, Gielen en Van der Klink (1995) synthesized the results of four studies, and concluded that no convincing evidence was found to support the premise that supervisory support directly contributes to trainee's performance. In fact, in studies where the supervisory support was controlled, only a part of the assumed direct effects were confirmed. Gielen and Van der Klink proposed that more powerful interventions of supervisory support are required to promote transfer directly, and more powerfully.

Another finding that was not assumed in the model was the reciprocal effect of perceived relevance of the training program and perceived supervisory support. This finding is consistent with the suggestion that employee motivation can be profoundly affected by management actions which, either intentionally or unintentionally, send salient cues or signals (Baldwin & Magjuka, 1991, p. 26). From their research Baldwin and Magjuka concluded that the mandatory status of a training program and the trainee's accountability to a supervisor affected motivation to transfer. In other words, when an employee perceives that the supervisor is supporting the training program, he or she will assume that this training program must be important or necessary.

Nevertheless, these results provide some evidence for the various models that describe supervisory activities before, during, and after training, which are assumed to enhance transfer of training (e.g. Broad, 1980, 1982; Gradous, 1991; Robinson & Robinson, 1989). From this study it can be concluded that supervisory support can certainly affect performance, although providing support was not part of any treatment or due to prescriptions of any kind. Given this fact, the effects of a combination of controlled supporting activities may be significantly larger than the effect found in this study.

Differences between Supervisors. At the start of this study no assumptions were formulated with respect to differences between supervisors. Two facts appeared: one being the supervisory support to affect performance, and the other being the supervisors providing this influencing support resided at various banks from different types and in different parts of the country. Therefore it was investigated whether differences between these supervisors existed. The

data indicated that significant differences existed between supervisors for the pretest score and the learning result. Apparently the training program was used differently by the supervisors: in some cases as initial training, and in other cases as refresher training. This could occur because the training department does not prescribe how and when to use the training program.

In addition, the trainee's perception of supervisory support varied significantly for different supervisors, and the supervisor's perception of trainee's features (e.g. job involvement, self-efficacy) was also significantly different. It is not unreasonable to assume that similar patterns will also occur in other settings, because supervisors are likely to have different perceptions on providing support, and consequently are likely to differ in actual provided support. These results can offer an explanation for the studies in which supervisory support was not found to affect performance. It is possible that when analyses are separated for different supervisors larger effects of support can be calculated.

Discussion

Firstly, the transfer of training model that was developed based on the literature review is perceived as output from this study. Secondly, this model was tested in the context of corporate training. In the previous section the more important results have been summarized and discussed. The relations that were assumed in this model were partially confirmed by the data. However, the model is not rejected or adjusted based on these results. One important reason for not rejecting the transfer of training model is that data were only available from one setting. As has already been indicated that unexpected effects were found, which were due to this one setting. These effects were primary due to the high work experience, affecting the learning result negatively. This influenced primarily the lack of evidence for the assumed relationships between learning result and opportunity to perform, and between opportunity to perform and performance. Of course, one can reverse this argument by not rejecting the model and stating that the relations confirmed by the data (as presented in Figure 2) were also due to this particular setting. This is certainly possible. Ergo, the transfer of training model will not be adjusted based on these results either.

Another result was the importance of the trainee's self-efficacy. It seems meaningful to discuss this issue although it is (again) specific to this study's setting. With the current focus on training effectiveness and reduction of training costs it may be profitable to reconsider the use of training programs. In this setting it appeared that work experience was a predicting factor for the pretest score, and for self-efficacy. Trainee's self-efficacy was in turn positively related to performance. With this mechanism in mind, one may consider to focus more on on-the-job training for tasks which can be expected to be learned relatively easy on-the-job. In this research setting, the tasks were not too difficult, so colleagues of the desk clerks could assist and/or explain how to perform.

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Integrating Work and Learning for Superior Performance

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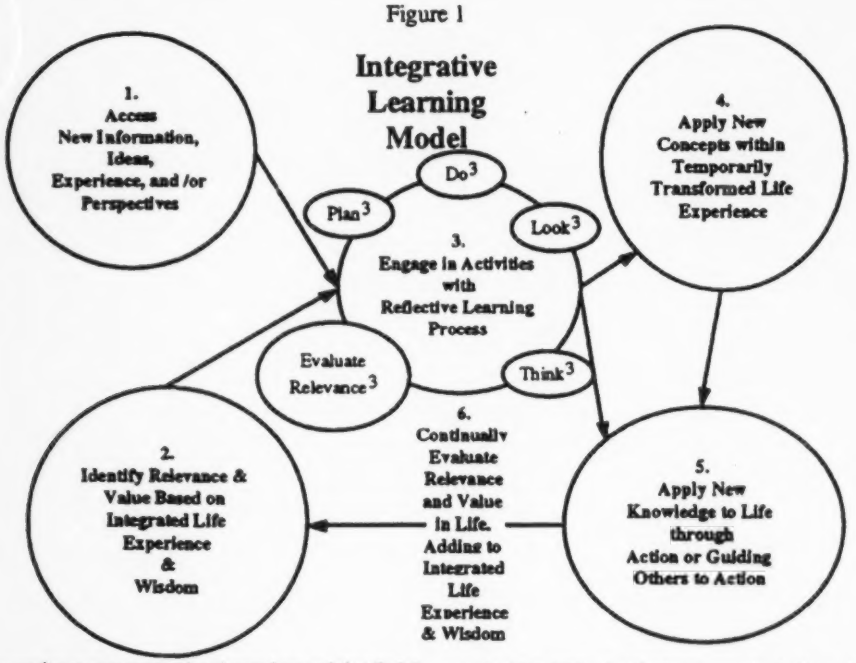
Worldwide, corporate education programs need to adapt to an accelerated pace of change and to increase learning transfer and superior on-the-job performance by learners. This paper introduces an Integrative Learning Model and four interwoven, interactive support components that facilitate integrating work and learning and foster enhanced learning transfer and superior performance.

Corporations throughout the world are undergoing an accelerated pace of change that requires effective learning transfer and an increased ability for corporate professionals to be *reflective practitioners* (Schon, 1983). Teaching-focused (largely instructor-led, *push*) paradigms are giving way to learning-focused (*pull*) paradigms (Montgomery, 1994). For professional consultants working in a global arena, training, education, and employee development (three cornerstones for Human Resource Development) (Nadler, 1979) are evolving into a requirement for learning to be integrated with work and for work to be integrated with learning (Lau, Fisher & Busby, 1995; Lau, Fisher & Seaman-Anderson, 1995). This integration of learning and work is a major aspect of the "learning organization" (Senge, 1990). Integrating learning with life experience is essential for effective learning transfer (see figure 1) (Montgomery, 1992). It is important to note that this integrative learning process applies to learning "on-the-job" (an area of life experience) as well as to learning in a focused learning environment.

Figure 1


Integrative Learning Model
1. Access New Information, Ideas, Experience, and /or Perspectives
2. Identify Relevance & Value Based on Integrated Life Experience & Wisdom
3. Engage in Activities with Reflective Learning Process
Do3
Plan3
Look3
Evaluate Relevance3
Think3
4. Apply New Concepts within Temporarily Transformed Life Experience
5. Apply New Knowledge to Life through Action or Guiding Others to Action
6. Continually Evaluate Relevance and Value in Life. Adding to Integrated Life Experience & Wisdom

(3 = moving to new perspectives beyond pre-existing limits) Copyright 1992, 1995 by Joel R. Montgomery. Used with permission.

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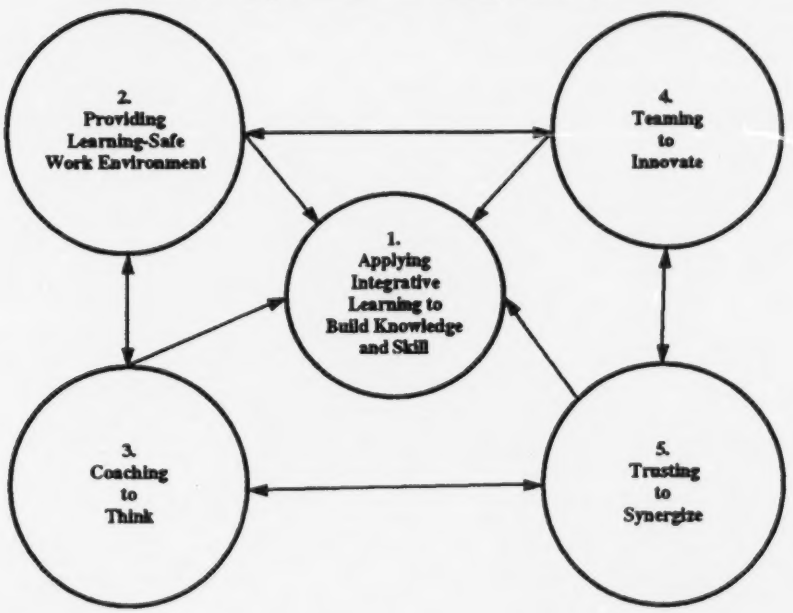
Integrative Learning

Each person brings to a potential learning experience the sum total of his integrated experience and wisdom. As he accesses the new information, ideas, experience, or perspectives, he begins to identify the potential relevance and value offered by the new experience. The next step is to work with the new information while engaging in activities involving the reflective learning process. As people move through the phases of the reflective learning process, they begin to integrate the new information with their life experience, potentially moving to new perspectives that allow them to move beyond pre-existing limits to thought, attitude, and action. Once the information is tenuously integrated, it is important for the learner to test the new information in a realistic context. When this produces satisfactory results, the learner will look for ways to apply the new concepts in work (life) contexts over time, always evaluating their effectiveness and relevance and deciding (consciously or not) whether or not to integrate the concepts fully into his life experience (Montgomery, 1992).

Figure 2

Support Components for Integrative Learning



Support Components

Four interwoven, interactive components support integrative learning in a corporate setting and lead to superior performance: *Learning-safe work* environment, coaching, teaming, and trusting (see figure 2). There are strong indicators that all these variables facilitate learning (Dean, 1995; Winslow & Bramer, 1994). Research has also indicated that transfer of learning is most effective when the learning environment resembles the work environment. Examples of these learning environments are classroom simulations, Microworld, and laboratory (Morecroft, 1994; Lane, 1994). Transfer can be even more successful when these same support components are present in both the learning and the *learning-safe* work environments. Artificial settings and the prefabricated material found in many learning environments are the possible barriers for direct

learning transfer. Another barrier in successful transfer of new learning is a lack of reinforcement and resources experienced by the learner when she re-enters the work environment (when the work environment is not *learning-safe*).

Working to Learn

Workers are challenged to learn new procedures and whole new ways of working and of looking at work. In order for them to grow into new organizational expectations, they need to build the competencies (knowledge and skills) necessary to allow them to do the job in their work context. To support this learning, organizations need to facilitate the acquisition of these competencies in a *learning-safe work* environment where learning from both successes and mistakes is encouraged and supported. Because human learning builds on our integrated life experience, organizational learning environments need to account for that experience, to work with an understanding of integrative learning , and to create an environment where learners engage in work activities using the same resources they would have in the workplace.

Teaming to Innovate

Business and industry have used focused teams to invent and innovate products and services. The secret of team dynamics is the tremendous source of creative energy within the teams (Mink, Owen, & Mink, 1993). In order to unleash the energy source a team-based learn-by-doing strategy can elevate the team to superior performance. The critical requirements for such a team in an integrative learning environment include conversation to share, coordination to synthesize and collaboration to execute.

Conversation to share requires each team member to assume personal responsibility, involvement and control of dialogue and subsequent actions created. Each team member should be willing to challenge her favorite conviction and mental model so to let team ideas flow freely within the team. Through conversations, each team member should visit each other's mental model and learn from it through asking fresh questions not to interrogate but to integrate into crystallized team ideas. Coordinate to synthesize includes open communication among team members through learning others' insights by not evaluating but appreciating others' perspective and not insisting on anyone's own belief or position. With the goal to synthesize, the team will develop better understanding of the targeted issues or topics. Collaborate to execute involves a series of questions that leads the team to create an action plan. The questions are: What should we be doing? What is stopping us? What can we do about it? Once the above questions are dealt with, the following questions should be asked and answered: Who cares? (Who knows about the problem?) Who can? (Who cares about the problem?) and Who do? (Who can do something?) Once an action plan is developed as a team, a *What if* scenario planning should be used to ensure the execution plan is possible.

Coaching to Think

A coach or facilitator is essential for the focused learn-by-doing team. The coach is the resource person who is positioned to provide on-demand assistance in guiding the team's thinking. The coach will ask insightful and challenging questions (Argyris, 1993) to stimulate thinking by the team and by each team member. Structured facilitation is not encouraged because of the possibility of hindering the team's or member's self-awareness of gaining insights of the targeted issues or topics. Structured facilitation tends to put a leash on members' train of thoughts and leads to only linear and serial thinking mode instead of systemic thinking. It is important for the

coach to encourage the team members to ask "fresh questions", share issues, analyze alternatives and execute agreed plans.

Trusting to Synergize

Trust is a key organizational as well as a teaming issue that permeates the organizational culture, the work team, and the learner. Gibb (1991) identified four stages of trust development in any group. These are: Trust, Openness, Realization, and Interdependence (TORI). As a learn-by-doing team evolves through each of the four stages, there is a greater likelihood for synergy to take place, allowing the possibility for the greatest gain from the learning experience. For learners to participate actively in learn-by-doing teams and apply the new knowledge and skills on the job, the organization needs to create an environment that encourages collaboration and trust both in and out of the learning setting. From a team member's perspective, trust is always a two-way street between team members. In the trust stage of development, team members begin to develop trust as a team by revealing themselves at a personal level to the team in a way that creates a personal contact rather than a facade of impersonal facts. When accomplished, this leads to the openness stage where team members share information freely without fear of attacking or being attacked on a personal level by other team members. In the realization stage, the foundation of trust between members allows the team to move into shared vision and common goals. In the interdependence stage, the members collaborate and take action both jointly and independently, knowing (and trusting) that the work of each member is for the benefit of the entire team. When the learn-by-doing team has established a foundation of trust and has moved through these four stages, the products they generate as a team (both in terms of task outcomes and learning) will show evidence of synergy (that is, will be better than products reflecting the combination of the best single efforts of each member of the team).

Hypothesis:.

Corporate learning experiences will result in superior on-the-job performance by learners when the principles of integrative learning are consciously applied and supported by these four interwoven, interactive, components: learning-safe "work" environment, coaching, teaming, and trusting.

Results and conclusion:

An earlier version of this model was used to teach human relations and reflection skills to more than 300 teachers-in-training at a public university in Florida (Montgomery, 1989). Learners demonstrated acquisition of desired competencies both in the classroom and in their private and professional lives (Montgomery, 1992).

The ideas proposed in this paper are still in a testing stage. Various elements suggested here have been used successfully for more than two years by a major international consulting firm in its professional development programs for more than 30,000 consultants in its global practice (Montgomery, 1994). The firm's successes to date have led to a commitment to create learning environments that help the firm's consultants build their skills as *reflective practitioners*. Some ongoing *learn-by-doing* research initiatives involving ideas proposed in this paper are listed below.

There is a lag time between the creation of new knowledge (learning) and its addition into the learner's integrated life experience and wisdom (see figure 1). Unless the learner is asked to apply this new knowledge immediately, it is difficult to measure the link between learning and transfer to the job. One way to create a more timely integration of the new

knowledge is to have the learners engage in learning while they are on the job and to ask them to apply what they are learning on the job as a part of the learning experience. This concept will be tested when a *proof-of-concept* proposal using integrative learning in a *virtual classroom* distance learning project is approved for funding later this year.

The principles of integrative learning were also taken into account in the planning for two professional development workshops for consultants. These will also be tested later this year.

After carefully considering four different learning approaches, one of the major U.S. airlines recently decided to use integrative learning in developing a workshop designed to prepare 1,000 managers to learn new ways of doing business and to integrate these new procedures as a part of their operations management. This project is also underway and will be tested in a few months.

More research is needed regarding the results of applying integrative learning and the four interwoven, interactive components to meet the learning needs of organizations.

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Intercultural Adjustment of U.S. Expatriates in the People's Republic of China

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A greater understanding of the antecedents of intercultural adjustment, particularly as they relate to Americans in China, can assist organizations in selecting, preparing, and supporting their expatriate workers. Interviews with 40 Americans and seven Chinese living in Beijing yielded seven categories of adjustment factors: personality, expectations, prior overseas experience, motivation, language skills, intracultural and intercultural relationships, and preparation and training. Of these, endogenous factors were of greater importance than exogenous factors.

The globalization of American business and the growing reality of a world economy shape the futures of many American organizations. The United States has more than 3500 multinational corporations, 55,000 companies with regular international involvement, and 40,000 firms that carry out periodic operations abroad (Harris & Moran, 1991). American companies have awakened to the potential of China in particular, both as a source of inexpensive manufacturing and as a market for American goods. China has the "fastest growing economy on earth," with an annual growth of over ten percent from 1991 to 1995 (Zhang & Liu, 1995, p. 3). The U.S. invested approximately $2.8 billion in China between 1985 and 1992 (Foreign Invasion, 1993). The total foreign trade between the United States and China in 1992 was nearly $17.5 billion (China Statistical Yearbook, 1993).

The internationalization of American business requires large numbers of on-site personnel who have expertise in doing business in the local cultural context. This need has been met both by hiring host nationals for management positions and by transferring Americans abroad for either short or long term service. Kobrin (1988) analyzed the assignments of expatriates and concluded that they play a crucial role in multinational corporations, as they alone understand both local and global conditions for the company. There is also a growing trend to view international assignments as not only a means to meet specific on-site management needs, but as a training ground for executives who may be located in the United States, but who will need to deal with global issues. Black, Gregersen, and Mendenhall (1992) described the strategic importance of managers who have international experience, and saw them as crucial to the success of international firms. Many American multinational corporations have apparently adopted this view, as 70% of American multinational corporations send personnel overseas (Caudron, 1991). Solomon (1994, p. 88) stated that "Eventually, human capital will cross national borders as easily as computer chips and cars do."

Early Termination of Expatriates

Despite the importance of expatriates, a substantial number of Americans abroad are unable to complete their assignments. Caudron (1991) reports an early termination rate ranging from 18% to 68%, depending upon the location. Other estimates fall within this range (Copeland & Griggs, 1985; Marquardt & Engel, 1993). Nor do these figures reflect the reality that the expatriate who ultimately fails in the assignment is likely to have been ineffective for some time, possibly offending host nationals and damaging the long-term success of the organization (Mendenhall & Oddou, 1985). Hofstede (1991, p. 226) observes, "Culturally clumsy expatriates can cause damage which is only noticed after their repatriation and which will easily be a multiple of the direct cost of their expatriation."

This failure also takes a toll on the individual in terms of career path, self-confidence and compounded stress on the family. Yet, failure in an overseas assignment is rarely due to lack of

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technical expertise, but rather because of an inability to adapt to cultural differences (Tung, 1981; Mendenhall & Oddou, 1985; Marquardt & Engel, 1993).

The success of expatriates is of great importance for U.S. multinational corporations. Expatriates, and the organizations which send them, have an inadequate understanding of those factors that facilitate adjustment to the host culture. A greater understanding of the antecedents of this adjustment, particularly as they relate to Americans in China, would assist organizations in selecting, preparing, and supporting workers abroad.

The purpose of this study was to define and describe the antecedents of intercultural adjustment for American expatriates in the People's Republic of China. This study explores the expatriate's own experience of preparing for life and work in China and describes those factors the expatriate feels are important to adjustment.

Theoretical Framework

A number of studies have sought to identify the antecedents of adjustment, that is factors that contribute to adjustment, adaptation, and effectiveness (Hawes & Kealey, 1981; Tung, 1981; Mendenhall & Oddou, 1985, Cui & Awa, 1992; Arthur & Bennett, 1995). The theoretical framework for this study is based on a model of cross-cultural adjustment used by Black and Gregersen (1991) in their survey research of adjustment of expatriates in Pacific Rim assignments. Specific antecedents explored in their study included previous international experience, culture-related training prior to assignment, time in the host country, job conflict and ambiguity, association with home nationals and host nationals, novelty of the host culture, and spouse's adjustment. Their hypotheses were confirmed only partially by a series of correlations between specific antecedents and measures of adjustment.

The interview guide developed for this study was based largely on the antecedents of expatriate adjustment identified by Black and Gregersen. Additional questions relating to self-efficacy (Mendenhall & Oddou, 1985) and motivation (Furnham, 1987) reflect themes that emerged during the pilot interviews.

Research Question

This study addressed the following question: What antecedent conditions or events in the lives of the expatriates contributed to their successful adjustment in China?

Implicit in this question was the desire to determine to what extent these factors are subject to outside influence, such as training or living and working environment.

Methodology

A review of the literature indicated that the majority of studies gathering new information about the adjustment of expatriates have used self-report questionnaires as the primary data source. While there are advantages to survey research, it was felt that, given the complexity of the adjustment process, it was desirable to obtain a more complete description of the expatriate's own experience of adjustment, a "thick description" (Guba & Lincoln, 1981) of the context and how the various factors interrelate to shape the world of the expatriate. A qualitative approach using in-depth interviews with expatriates was used to better understand this process.

Although qualitative approaches are most often associated with exploratory research (Merriam, 1988), this type of research can be used to clarify and enrich areas that have also been the domain of previous quantitative studies. Collecting data by means of interviews allowed for more complete expression of ideas in a realistic context of one-to-one dialog. Interviews, as contrasted to surveys, also allowed for observations of nonverbal cues and other manifestations of affective aspects of a subject's adjustment process.

The population of interest in this study consisted of U.S. expatriates working in Beijing, P.R.C., specifically, professionals working in the fields of business, education and government. Following

Patton (1990), a purposeful sample was chosen to glean a maximum amount of information from what seemed to be information-rich cases. In qualitative research a sample is deemed adequate when additional cases appear to add no new information to the phenomenon under investigation. Based on the results of a pilot study of 12 subjects not involved in the final study, 40 U.S. expatriates were interviewed. Seven additional interviews were conducted with Chinese nationals who had worked extensively with U.S. expatriates.

The sample was determined by accessibility and the willingness of each subject interviewed to spend the necessary time with the researcher. In addition, subjects had to be assigned to work in China for one year or more, and must have lived in China for at least four months at the time of the interview. The 40 subjects interviewed included 15 females and 25 males, 20 of whom were married and 20 single at the time of the interview. The ages of the subjects ranged from 25 to 60, with an average age of 38. Twenty-two subjects worked in private business, 15 in education and 3 in U.S. government foreign service. Time spent in China as an expatriate ranged from 6 months to 9 years with an average of slightly more than 3 years.

The antecedents of expatriate adjustment explored by Black and Gregersen (1991) served as the basis of the interview guide. Items related to self-efficacy (Mendenhall and Oddou, 1985) and motivation (Furnham, 1987) were later added to reflect themes that emerged during the pilot test of the original interview guide. Interviews were tape recorded and later transcribed by the interviewer. In addition to the tape recording, the interviewer maintained a log of comments regarding each interview. Written immediately after each interview, the log contained observations of the interview context, nonverbal behavior, and other impressions.

Results

The Americans who work in Beijing are a diverse group with a wide range of exposures to Chinese life. Expatriates with the U.S. Embassy or large corporations can live relatively insulated from real life in China. They may view China as but another assignment in their rotation or another step in their career path. Others live close to the people and are immersed in the Chinese language and culture; their personal and professional futures are in China. In between these extremes are many on both short and long term assignments, with varying degrees of interest and insight in their surroundings.

Most expatriates in the business area led somewhat tightly circumscribed, single focus lifestyles. They often had little time or energy for exploring the culture, studying the language, or making Chinese friends. Long workdays and grueling schedules were common. Like businesspeople, American Embassy personnel can live relatively independently of the local economy and culture. U.S. government employees are also subject to a non-fraternization policy that requires them to report significant contact with Chinese nationals. This can have the unfortunate consequences of limiting their interactions with the Chinese to merchants, taxi drivers, and others in impersonal situations. As perpetual outsiders, they may see only negative aspects of Chinese society and may not be inclined to pursue further relationships. In comparison with corporate and government employees, teachers are immersed in Chinese daily life. They live in Chinese neighborhoods, and their relatively low pay often denies them access to many of the western amenities and diversions available to other expatriates. The compensation for this is a more relaxed schedule and the potential for developing friendships with Chinese students and fellow teachers. Many teachers were observed to actively pursue opportunities to learn the language and culture.

Despite the variations in schedule and standard of living, the interviewees from business, education, and government responded to the interview with equal cooperation and candor. All groups proved to be insightful, articulate informants.

Emerging Themes Subjects' responses to the interview were remarkably consistent as well. What emerged from their comments was a portrait of the expatriate who is well-adjusted and effective in China, regardless of occupational assignment.

Personality. The single most consistent theme to emerge from the interviews was the preeminence of personality over all other considerations. While certain other factors such as attitudes, experiences, and preparation were seen as relevant, virtually all respondents focused on the notion of personality. Time and again, when discussing their own backgrounds and the successes and failures of fellow

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expatriates, subjects referred to characteristics which fell into the category of personality traits. How was this category described by the subjects? Descriptors included flexibility, tolerance and open-mindedness, independence, risk-taking, curiosity, patience, stability and sensitivity to different values. These personality characteristics were identified not only by the 40 U.S. expatriates, but by the seven Chinese informants, as well.

The interviewees felt that training, prior experience, and the availability of practical and emotional support are all mediated by the personality of the individual expatriate. Subjects made statements such as, "Personality is definitely most important.", "I think it completely depends on the personality." and ". . . if he has the wrong kind of personality he is not going to make it here."

Expectations. The second most saturated category was entitled, "expectations." Appropriate expectations were deemed crucial to making a good adjustment, and inappropriate expectations were frequently cited as a primary cause of failure. High expectations were associated with poor adjustment. Truly adaptive expectations, on the other hand, were seen to be lower than or equal to both living conditions and work accomplishment. In fact, several subjects insisted that one of the primary benefits of training and overseas experience prior to expatriation was the effect these had of lowering their expectations.

Prior Overseas Experience. Prior overseas experience proved to be the third major factor in adjustment. Surprisingly, the initial response to questions concerning the importance of prior overseas experience was negative. But, as the interview progressed, it became evident that these experiences had indeed made a contribution to the subjects' adjustment by shaping expectations and attitudes, as well as giving specific knowledge. If subjects had prior overseas experience, they appeared to have an increased sensitivity to cross cultural issues, were more flexible in aligning expectations with reality and were more tolerant of differences. Indeed, the majority of those interviewed had prior overseas experience.

Motivation and Well Defined Goals. The fourth theme to emerge from the interviews was that of the importance of motivation and well defined personal and professional goals. Though no questions were directed to the issues of motivation and goals, the majority of interviewees made implicit or explicit reference to their importance. A few respondents felt that motivation was the most important issue of all. As one teacher said, "People who really want to be here, they will be all right. If they don't want to be here, they won't adjust, they won't be able to handle it." Strong motivation and clearly defined goals facilitate adjustment. However, many expatriates interviewed felt that strength of motivation alone is not sufficient. They indicated that there are certain motives and goals associated with good adjustment, and others that lead to ineffectiveness or failure. Even the most highly compensated businesspeople rejected money as an appropriate motivator for an assignment in China. Virtually everyone contended that goals such as learning, personal growth, service, and making a contribution produced the most satisfactory results.

Language Skills. The fifth major adjustment factor identified was that of Chinese language skills. Interviewees distinguished between the roles of basic language skills and more advanced language skills. Basic language skills were said to facilitate activities such as shopping and transportation, allowing the expatriate to participate more fully in daily life. More advanced skills brought cultural understanding and an ability to relate to a broader cross-section of Chinese society. The importance of language skills differed according to the length of stay, personal goals, and the professional role of the expatriate. Only a few of those interviewed actually used their Chinese language skills in their work, but the majority either had fundamental language skills or were studying the language. Those who learned at least the most basic expressions allowing them to carry on daily tasks appeared to be the ones who adapted more successfully. The complete lack of language skills was observed to severely limit an expatriate's options and personal freedom.

Relationships with Americans and Chinese. The next major adjustment factor to emerge from the interviews was that of the expatriates' interpersonal relationships with other Americans and with the Chinese. The most important of these relationships were those within the expatriate's nuclear family. The well-being of spouse and children were closely linked to the expatriate's success and effectiveness. Family problems were cited most often as the reason for unhappiness or the inability to complete an assignment. At the same time, positive family relationships were a source of real strength and stability. Strong family bonds and agreement over the decision to live in China provided much needed support. Relationships with other Americans have the potential to be a source of practical and emotional

support, but only if these countrymen are themselves having a positive experience in China. Virtually none of the expatriates in business or government had close Chinese friends, but educators reported that their Chinese friends played an important role in coping with daily life and in overall adjustment.

Training. The seventh and final factor contributing to successful adjustment was training. Though the majority of interviewees had not participated in a formal training program prior to their arrival in China, most felt that some type of preparation was helpful. The type and amount of preparation needed were seen as dependent upon the personality of the expatriate and the role played in China.

It should be noted that the researcher had fully expected training and preparation issues to be an important part of the interview. It was assumed that proper training would be a prerequisite to good adjustment, but in reality, preparation and training played a far less important role in the experience of the expatriate than was anticipated. A common response to questions about preparation was, "Nothing can prepare you for China!," followed by a hearty laugh. It was clear that many interviewees truly doubted whether any activity conducted outside the country could ready one for life in China. Several observed that some training programs can actually decrease the sense of urgency in attending to cultural differences.

Interviewees felt that any preparation that is given should include some basic language skills and practical instruction on daily life and common interpersonal interactions. They stated that preparation that is too abstract or is out of date contributes little to adjustment. In addition to practical skills, the primary benefit of preparation was the effect it had on expectations. Training was deemed to be especially beneficial if spouses and family members of working expatriates participated.

Discussion

Endogenous and Exogenous Factors The antecedents of adjustment that emerged in this study lend themselves to analysis in terms of endogenous and exogenous factors. Endogenous factors in adjustment are those which originate in and are a function of the person, such as personality traits and motivation. Exogenous factors are those which are in the environment or which are external to the person, such as work characteristics or spouse adjustment. Exogenous factors also include training and prior international assignments, which may have an effect on endogenous factors. This distinction between endogenous and exogenous factors may have implications for a more inclusive model of intercultural adjustment, but is not intended to constitute a model in itself.

The antecedents of intercultural adjustment of Americans in China are primarily characteristics of the individual expatriate. Endogenous factors such as personality, expectations, motivation, and knowledge determine almost completely the degree of intercultural adjustment and effectiveness. Apparently, training and experience can enhance effectiveness and even shore up weaknesses, but they cannot replace basic personality characteristics. The well-adjusted expatriate is first of all the *right kind of person.*

Exogenous factors such as prior overseas experience and specific training and preparation contribute to the success of the expatriate to the extent that they affect personality and expectations, and provide practical knowledge and language skills. Family relationships and the adjustment of family members have a significant impact on the completion of the assignment as well.

Recommendations for Selection The results of this study indicate that endogenous factors are most important for intercultural adjustment, making selection the most important step in the process of expatriation. If adjustment and effectiveness are affected primarily by personality characteristics, relatively stable attributes of the individual shaped by the totality of ones experiences, then the organization should put a great deal of effort into finding the right person to start with. The potential expatriate should have reasonable expectations of the overseas assignment, or an indication that his or her expectations are subject to modification. Prior overseas experience is a significant asset, especially experiences in Asia, China, or less developed countries. Experience that required a greater degree of independence and exposure to the host culture is preferable.

Though the goals of the candidate should be consonant with that of the organization, the organization should look for additional motivation based on a desire for personal growth and making a positive contribution to a foreign society. Chinese language skills, or the motivation and aptitude to gain them, are an asset.

The spouse and family members should be considered in this selection process, and should display many of these characteristics as well. The spouse should be in agreement with the overseas assignment. It is also desirable for the spouse to have a history of working outside the home, and skills and background that increase the potential for employment.

Recommendations for Preparation Once identified, this individual and spouse should be provided with the information and experiences necessary to develop a realistic set of expectations concerning life and work. This may be best achieved through a look see visit, talks with experienced expatriates, and other information sources. Though training and formal preparation was a relatively low priority for the interviewees, it may be that the typical training program does not address those issues and attitudes that are most important for adjustment. Rather than dismissing training entirely, the results of this study should be used in planning the content and methods of training. A measure of training that includes an introduction to the language should be given before departure. The organization should take pains to ensure that the information given in training is relevant, realistic, and current. Erroneous information is worse than no information at all. Though a preferred mode of training was not indicated in the interviews, it seems clear that methods that have an impact on attitudes will be more productive than methods that impart knowledge alone. Methods that increase self-awareness and address affective as well as cognitive issues are more likely to influence adjustment.

Future Research Finally, the results of this study have shown that qualitative methods, especially the semi-structured interview, is an invaluable, but under used method for studying expatriate adjustment. Additional qualitative research is recommended, as well as studies addressing the role of personality, motivation, the expatriate family, and the universality of antecedents of intercultural adjustment.

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Cross-cultural Training—Review of Literature and An Action Learning Approach

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Both academia and business have to recognize that cross-cultural training is a bottom-line issue that must be dealt with in today's global competition. In the present study, cross-cultural training research was classified into three approaches: 1) development stages, 2) contingency, and 3) social learning theory. Problems that related to effectiveness of cross-cultural training and cross-cultural training design were observed and analyzed. A learning approach—action learning— was presented as an alternative method for conducting cross-cultural training.

Global competition is a significant issue which every major business in the United States must face in order to survive. The effort of expanding into international markets has created an upheaval within many U.S. businesses. Therefore, there is a greater need than ever for managers to think in the global context. Company decision makers have begun to realize that, in order to succeed in the emerging global market, corporate strategies have to respond to global competitive conditions. Due to the increases in international trade, competition, acquisition, and interaction, companies are forced to relocate thousands of their most experienced employees to various foreign nations or areas. Unfortunately, due to lack of proper cross-cultural training, between 16 to 40 percent of all American expatriates are not able to make the transition successfully and return home prematurely (e.g., Misa and Fabricatore, 1979). The costs associated with such failed assignments range from $50,000 to $200,000 (Tung, 1981) per case.

These high-cost failures among American expatriates reflects the difficulties expatriates and their families have experienced in making cultural adjustments. Research suggests that cross-cultural training could assist expatriates in the development of interpersonal skills, in the cross-cultural adjustments, and in the job performance required in the cross-cultural encounters (e.g., Black and Mendenhall, 1990). Therefore, cross-cultural training has been recommended as a means of facilitating effective cross-cultural interactions (Mendenhall, Dunbar, & Oddou, 1987). Although most American business organizations recognize the importance of cross-cultural training, they do not support or even use it. The most prevailing reason for the low use of cross-cultural training is that such training is thought to be ineffective (e.g., Tung, 1981; Mendenhall & Oddou, 1985). Relevant research argues that such negative views about cross-cultural training are due to the isolation of human resource functions from mainstream business activities and the lack of support from top management (Black and Mendenhall, 1990). These, in turn, cause many faulty international human resource decisions and significantly high expatriate turnover rates.

This review attempts to, first, analyze the major development of theory in cross-cultural training since the 1980s. Second, by pointing out what has been overlooked in previous research, this article attempts to utilize an alternative approach—action learning—to direct research on *how* cross-cultural training can be conducted.

Review of literature

To show the diversity of approaches toward cross-cultural training, the following three different approaches: development stages, contingency, and social learning theory are discussed below.

Development Stages Approach It is commonly agreed that cross-cultural sensitivity is not natural. People employ a wide range of strategies from ethnocentrism to ethnorelativism to deal with cultural differences. How people adapt to those strategies seems to be dependent upon

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the stages of their personal growth (Bennett, 1993). Hence, those who manage and design cross-cultural training have the responsibility to diagnose trainees' individual development stages and facilitate them toward more cross-culturally sensitive stages. Bennett argues that cross-cultural sensitivity development moves through cognitive, affective, and behavioral dimensions. She assumes that people react to different cultures by, first, generating relevant categories for the existing differences. Next, they feel a threat to the stability of their worldview when they realize that their own culture is merely one of a variety of worldwide views, they feel a threat to the stability of their worldview. For instance, they may react defensively toward different cultures. And lastly, people develop a treatment for the threat by merging the cultural differences into universal categories and moving toward a common goal which results into the construction of their own identity. Based on these assumptions, Bennett proposes a development model of cross-cultural sensitivity as shown in Table 1.

Table 1

The Ethnocentric Stages	The Ethnorelative Stages
I. Denial (people believe that cultural diversity only occurs elsewhere) 1. Isolation 2. Separation	IV. Acceptance (cultural difference is both acknowledged and respected) 1. Behavioral Relativism 2. Value Relativism
II. Defense (people evaluate a different culture as negative and inferior) 1. Denigration 2. Superiority 3. Reversal	V. Adaptation (people establish the framework for appreciating cultural difference) 1. Empathy 2. Pluralism
III. Minimization (people try to bury cultural difference under the weight of cultural similarities) 1. Physical Universalism 2. Transcendent Universalism	VI. Integration (people integrate disparate aspects of their identity into a new whole while remaining culturally marginal) 1. Contextual Evaluation 2. Constructive Marginality

Bennett then suggests, in order to effectively achieve learning objectives, different development strategies and activities could be utilized in different stages for cross-cultural training programs, as shown in Table 2:

Table 2

Development Stage	Strategies/Activities
Denial	Cultural Awareness activities
Defense	Emphasizing the commonality of cultures, especially in terms of what is generally good in all cultures.
Minimization	Simulations and reports of personal experience
Acceptance	Emphasizing the practical application of ethnorelative acceptance to cross-cultural communications
Adaptation	Dyads with other culture partners in face-to-face communications and discussions.

In summary, advocates of development stages approach suggest that the goals of cross-cultural training are to increase the trainees' awareness about their developmental stages (Bennett, 1993), to recognize the trainees' culturally held values, and to help them develop ethnorelativism.

Contingency Approach In choosing an appropriate training method, Tung (1982) classifies cross-cultural training programs under five categories: area studies, cultural assimilation, language preparation, sensitivity training and field experience. She argues that the degree of expected interaction and similarity between the native culture and host culture is important in determining the cross-cultural training. Therefore, if the expected interaction

between the expatriate and members of the host culture is low, and the degree of dissimilarity between the expatriate's native culture and the host culture is low, and as a result the content of the training should focus on task and job related issues and the level of rigor necessary for effective training should be relatively low. For instance, the area studies program would be sufficient in this case. If both the expected interaction between the expatriate and the host culture and the degree of dissimilarity are high, the content of the training should focus on the new culture and on cross-cultural skill development, and the level of rigor of such training should be moderate to high. In this case, all five types of training programs would be important, with particular emphasis on sensitivity training and field experiences. Trainers should assess the degree of consideration between these two extremes in basing the type of training program that would be appropriate for each individual.

However, without defining rigor and what determines rigor, Tung's framework is considered less useful for multinational companies to select for appropriate training methods (Black & Mendenhall, 1989).

Social Learning Theory Black and Mendenhall (1990) elaborate on the use of Bandura's (1977) social learning theory in cross-cultural training to develop skills which can be reproduced during actual cross-cultural encounters. They argue that to apply social learning theory to cross-cultural training frameworks is to answer the questions of why cross-cultural training is effective and which situations are best served by what specific training methods.

Integrated with social learning theory which argues that learning takes place by both observation and experience (Bandura, 1977; Black, Gregersen, & Mendenhall, 1992) and Tung's (1982) contingency approach, Black and Mendenhall (1989) and Black, Gregersen, and Mendenhall (1992) propose the "cross-cultural training tube" as a useful framework for cross-cultural training program designs (See Figure 1).

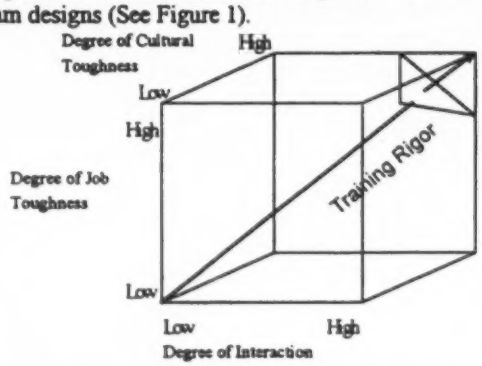

Figure 1. Integration of Cross-cultural Training Rigor and Main Contingency Factors
(Source: Black and Mendenhall, 1989, p. 528; Black, et al., 1992, p. 104.)

The assumption underlying the "training tube" is simple: the greater the cultural toughness, communication toughness, and job toughness, the greater the need for rigorous cross-cultural training.

The vertical axis shows the dimension of job toughness, ranging form low to high. The bottom horizontal axis represents degree of interaction, ranging from low to high. The top horizontal axis represents degree of cultural toughness, ranging from low to high. The diagonal line, which runs from the front left corner to the back right corner represents training methods and rigor, ranging from low to high. Thus, any point in the three-dimensional space can be interpreted as the combination of job toughness, interaction, and cultural toughness a person would face in a foreign assignment. The intersection of the point and the diagonal line can be determined by imagining a plane at a right angle and traveling on the same diagonal as the diagonal line. The plane is placed at a right angle because adjusting to a tough job overseas is easier than adjusting to the general culture or interacting with the local nationals (Black & Stephens, 1989; cited in Black & Mendenhall, 1989). When the plane intersects the point which

are plotted based on estimates relative to each of the three dimensions, it also intersects with a point on the diagonal line representing training rigor. That intersection provides a rough estimation of the training rigor required for the expatriates.

Researchers conclude that the content of the training would be a direct function of the three dimensions (Black and Mendenhall, 1989; Black, Gregersen, and Mendenhall, 1992). Cross-cultural training programs then should be designed in accordance with the relative scores on each of the three dimensions.

Problems with Current Cross-cultural Training Strategies

Effectiveness of training programs Although the importance of evaluation is well recognized by both business and academia, few if any research has focused its energy on evaluating the effectiveness of cross-cultural training. An exception is the study done by Black and Mendenhall (1990). The conclusion of their study is straightforward: "a total of nine studies examined the relationship between cross-cultural training and adjustment... (all) found a positive relationship..." (pp. 118-119). However, without understanding how the training affected both the organization and the trainees, neither an improvement of the program can be made, nor can a measurement of the return on investment be quantified. Traditionally, training effectiveness is easily measured by counting the "smile sheets" after each training session and measuring how "satisfied" the trainees are. This measurement usually is known as the level-one evaluation—how learners feel about the training. Although the information obtained from this method has been argued not to be useful (e.g., Kirkpatrick, 1967), due to the difficulties involved in estimating the effects at higher levels, it is still the prevailing method used by the majority of training professions. Furthermore, some organizations measure and evaluate the effectiveness of cross-cultural training by counting the numbers of trainees who have completed their assignments without coming home early versus those who return home without completing their assignments. For example, a comparable analogy would be to measure a soldier's combat training by counting the number of soldiers that return home in body bag versus those who return alive. Therefore, these methods lack the ability to assess the degree of improvement of the trainees in their cross-cultural training program, and further these methods do not help the organizations understand the degree of contribution the cross-cultural training has on the success of foreign assignments.

As a practice, businesses should place a higher level of consideration on the effectiveness of cross-cultural training. For instance, the second level in Kirkpatrick's (1967) model measures learning that has taken place during the training. The third level of evaluation provides evidence of the transfer of knowledge, skills, and attitudes back to the job, and level four assesses the results to the organization. Each of these levels of evaluation should be carefully planned in order to justify the cost and time devoted to the training program. Moreover, to make the evaluation effective in determining whether or not trainees retains the new information and uses it on the jobs, whether or not the course material is appropriate and adequate, and whether or not trainers are competent, evaluation must play a more significant role in the process of program design should be implemented. Organizations should no longer be concerned with how good trainees "feel" about being trained or how well they score on a test in a non-work environment. Employers ought to know how cross-cultural training alters their behaviors, how those new behaviors affect job performance, and how new performance contributes to the bottom line number of any business.

Design of cross-cultural training Another problem associated with cross-cultural training research is that no instrument has been developed to measure either "cross-cultural sensitivity," (e.g., Bennett, 1993) "rigor," (e.g., Tung, 1982; Black and Mendenhall, 1990) or "degree of cultural, job, and communication toughness" (e.g., Black and Mendenhall, 1990). As a result, it creates a dilemma in most multinational firms. Since the importance of cross-cultural training has been gradually recognized by many multinational firms, decision makers understand that they need to have their own cross-cultural training courses designed with or without the help of the academia. Unfortunately, due to the absence of adequate instruments, the result of such

designs sometimes are far from ideal. Having been trained within this problematic training structure, the expatriates often are ill-prepared before they are assigned abroad. Thus, early returns from the assignments seems to be an inevitable tragedy. Therefore, despite research's claims that the majority of Fortune 500 corporations are satisfied with their cross-cultural training programs (McFarland, 1995), there is no evidence that shows whether these satisfactions come from the exceptional designs based on recommendations from academia, or whether these designs result in their expatriates to have a lower turnover rate. Therefore, further research is needed on how to increase the practical application of cross-cultural theory in the industry, as well as on the cause-effect relationship between cross-cultural training programs and successful foreign assignments.

Action Learning—An Alternative Approach to Cross-cultural Training

The methodologies covered in the literature review mainly focus on the concepts of *what* a cross-cultural training should include. Little attention has been paid to *how* cross-cultural training should be conducted. On the one hand, organizations often recognize their learning objectives after the problems or needs are identified by the needs assessments or simply by their mission statements. Organizations would accordingly adopt any training methodology that is the most appropriate to their needs. They then would implement the training in accordance with the design and the curriculum. By following these processes, organizations design the cross-cultural training as a "one-size-fits-all" event. Every expatriate-to-be is expected to fit well in such a training structure. On the other hand, the issues involved in a cross-cultural training is so complicated—for example, personality, cultural rigors, interpersonal skills and so on— that many traditional design methods can not be easily applied. Most importantly, the fact that trainees of any cross-cultural training program are experienced adults—they are middle to top managers, lead technicians, or public relation personnel—is often overlooked. As adult educators have pointed out, those adults experience, learn, react, and self-perceive differently from school children. School children have their teachers define a subject matter, assign readings to learn about the subject, and administer exams to measure individual mastery of the subject matter. In today's world a adult's ability to learn from his or her experience and resourcefulness is invaluable. It is a common occurrence for adults to be asked to define a problem, locate the appropriate learning materials, and demonstrate both subject matter comprehension and the ability to apply the knowledge to the job or for personal development. These needs call for thoughtful, autonomous learners rather than dependent learners. Therefore, *how* the cross-cultural training should be conducted will be strongly dependent upon those adults' learning styles, abilities, and their life experiences.

Malcolm Knowles (1980) assumes that adult learners have the following characteristics: 1) They join a learning activity with the self image of being mature, self-directing, and responsible adults; 2) Their experiences are considered to be a valuable resources for their learning. They learn more effectively by contributing their experiences to learning situations and relating their experiences to new knowledge; 3) Adults are aware of specific learning needs generated by real life tasks or problems; 4) Adults are "performance-centered" and have immediate intentions to apply what they have learned to real life problems. That is, adults are more interested in learning *how* to do than *what* to do. Based on these assumptions, a cross-cultural training program would be more sensible if the course designers and the trainers acknowledged that the trainees—the adult learners— are already responsible for their learning.

This alternative approach is known as "action learning." According to Harris & Moran (1990), action learning is "a form of training that emphasizes variety of methodology and maximum participation by the learner, usually by means of some form of group process" (p.294). Reg Revans, the creator of action learning, identifies some of the assumptions about action learning which differentiates it from the traditional learning: 1) trainees will increase their learning when they reflect on what they did in training. 2) Trainees cannot rely on experts to make decisions. 3) To be the most challenged, trainees need to work on unfamiliar problems in unfamiliar settings. 4) The role of facilitators is essential. Facilitators can accelerate learning by

helping trainees constructively reflect and self-reflect. 5) Whether in individual or group learning, the organizational system as a whole should be examined (Revans, 1971).

Revans expresses learning as: L (learning) = P (programmed knowledge) + Q (questioning insight), which means learning is the function of the programmed knowledge of the past and the questioning insight needed for the future. For example, instead of teaching management, the facilitator offers ways of how to learn management and encourages learners to challenge existing assumptions and beliefs so they can come up with new ideas about management in sights.

Action learning focuses on real problems within the organization. This method believes in starting with the adult learners' actual experiences. Since action learning is built around real-life problems with real consequences, the learners are usually motivated in dealing with issues that block their understanding and their solution to the problem (Marsick, 1990). Trainees approach learning activities in cross-cultural training with a problem-solving rather than information-receiving mindset (Knox, 1988). In the case of cross-cultural training, the real problems lie in the expatriates' daily lives, in their working environment, at their homes, in their communication skills with local nationals, in their abilities to adjust to new cultures, in their abilities to handle difficult situations, and so on. The issues that block the understanding and solution to these problems may stem from misperceptions, beliefs, and prejudices that dominate or influence learners' feelings (Marsick, 1990). Since these issues are relevant in the effectiveness of real-life actions, learners who work on teams and receive feedback from their peers will have the opportunities to challenge and to be challenged by those problems, and in return, solve the problems together.

Action learning is a powerful tool for cross-cultural training. To implement this method it first requires a "just-in-time" approach to respond to current cross-cultural managerial needs, interpersonal needs, and communicational needs. Hence, the practice of action learning in cross-cultural training should be a "post-departure" training, instead of the well-accepted "pre-departure" training. Therefore, cross-cultural training should be conducted after the expatriates-to-be have the opportunities to experience the targeted cultures for which they are assigned. After they have interacted with the targeted cultures or lived in a foreign nation, performed their major duties in that particular environments, and possessed a certain degree of real-life cross-cultural experiences, the trainees should be "recalled" back to the headquarters or a training facility for further training on action learning. It does not mean that there is no need to train the expatriates before they go abroad. On the contrary, organizations still have the responsibility to prepare their expatriates in language and management development training which usually will demand extensive training time.

Secondly, once the expatriates are "recalled", action learning not only encourages but obliges trainees to discuss problems together in the set. Learners are asked to employ resources throughout the organization, using all the people skills and political acuity they can muster, to take the risk of making a major decision, and then to verify and defend that decision against the real cross-cultural problems.

Further, action learning will not be successful without the assistance from the facilitator. The role of facilitator is not to teach but to help trainees learn from exposure to cross-cultural problems and from each other. The facilitator can assist in reflection, critical reflection, and critical self-reflection and thus help learners learn effectively from their experience (Marsick, 1990).

Finally, although action learning is an ideal technique for manager development , it is not for every organization. According to Raelin and LeBien (1993), the first drawback of action learning is: it relies entirely on top management's cooperation and sponsorship. Another drawback is that its practice is viewed as anti-intellectual because more attention is directed towards solving the real-life problems rather than resolving cross-cultural differences. Thirdly, as pointed out, action learning works best when it applies the "just-in-time" structure which responds to present cross-cultural managerial needs. However, the timing is difficult to measure and it is difficult to respond to the needs of each individual throughout the training program.

Finally, using action learning in cross-cultural training would heavily rely on experienced and sensitive facilitators who can facilitate a group-learning environment and be willing to commit himself/herself through the duration of the training.

In summary, action learning is implemented through the combination of action and reflection seminars (Marsick, 1990). Through project work and seminars on real-life problems in the organization, learners reexamine concerns from their daily cross-cultural encounters in light of new learning. The application of cross-cultural principles and skills is essential for trainees to practice and it enables them to transfer the training experiences back into their lives. Explicit and repeated attention to learning processes ensures that trainees are equipped to handle such learning experiences during and after the training.

Conclusion

As a result of global competition, the business world today faces a greater need and demand for their employees to possess the ability to be cross-culturally sensitive. Research on cross-cultural training has made a tremendous contribution on helping businesses better prepare their expatriates for the challenges of living and working abroad. This group of expatriates who are prepared to interact with, adjust to, and appreciate with other cultures, in turn, are able to more effectively perform in the global market as expected. In addition to business and monetary benefits, both the individuals and the organizations benefit from taking advantage of this valuable human resource asset.

Using action learning as an alternative method in cross-cultural training creates a new way of thinking for most human resource professionals. It requires the support and vision of the top management. Both trainers and top management must recognize that cross-cultural training is not a panacea. It is an unusual training method which might require on-purpose "recalls." And most importantly, since people learn best when they focus on real problems in their jobs and in their lives, the trainees of cross-cultural training must first experience what they are expected to experience. Armed with their first-hand experiences in the first few weeks abroad, action learning allows expatriates to start to learn along with each other in a set. By learning how to critically reflect in the group and how to act in the cross-cultural encounters, learners are able to consciously apply what they have learned about real cross-cultural issues back to their real lives more openly.

Finally, applying action learning to cross-cultural training requires changes of perceptions from both the learners and the organizations about what learning means to adults. It is all too often the case that the action learning project becomes merely another technique which is introduced without any learning strategy and without a connection to any central method of belief about how adults learn. Therefore, caution must be given in regard to adult learning while conducting cross-cultural training.

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Filters of a Family Kind: How They Impact Global HRD -- and Why West Doesn't Always Meet East

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The way one thinks is driven by what Geert Hofstede terms "mental programming" and this impacts intercultural communication in important ways. There can be a wide disjuncture between Western thought and that found in the East. While this has received research focus, there has been little attention paid to cultural filters of a family kind and their implications for global human resource development.

Human resource development is increasingly a global enterprise, one in which failure to consider cultural differences can lead to termination of business contracts, ineffective training deliveries, loss of competitive advantages, and other negative outcomes. American HRD professionals are unevenly prepared for global projects or service with international organizations that require residence in countries bearing little resemblance visually or culturally to the United States. They may initially make false assumptions about surface similarities that prove misleading when they actually engage, over extended periods of time, in host-country business communications and social interactions (Coghill, 1994). Firms that are centered in the United States tend to espouse management policies and approaches to HRD that can be parochial and highly ethnocentric in character (Hofstede, 1993).

Recognizing Theoretical Constructs

This study explores how filters of a family kind can illuminate our understanding of how to deal with HRD in a multicultural milieu, drawing contrasts between the United States and China and to a lesser extent, Japan and Indonesia. It sets out to show how American management and HRD are largely missing the important family-related filter, and are therefore extremely vulnerable to miscue and faux pas when dealing with these Asian countries. As Pascale and Athos point out, in writing on *The art of Japanese management:*

> We Westerners think we rely principally on our anchor --our self-concept. The Japanese see themselves, less as 'anchored' than 'moored' by many lines that are tied to friends, organizational colleagues, and family (1981, p. 122).

It is a compartmentalized (Western) versus a holistic (Eastern) view, and it has major implications for how we encode and decode communications. This difference can also be characterized as low context (West) and high context (East). We cannot do business with China or expect to meet HRD needs without including family considerations. In China, "one's identity is intimately linked to cultural values regarding family and relationships" (Pratt, 1991, p. 287).

The theoretical and experiential constructs that undergird American management thinking are plainly a cultural legacy. American expatriates tend to be educated, indelibly pragmatic, imbued with Western culture and pride, and certain that the world is eager for American ways and American expertise. While the West has much to offer, it also has much to learn. Routinely, experts and technical consultants from the U.S. do not take sufficient account of the reciprocal desire of other cultures to teach and to be recognized for their centuries of coherent thought and practices.

At the very heart of most disconnects between Americans and others, particularly those in Asia, is a wide divergence of views around family. Concepts and traditions of what a family is, how it operates, and how it influences social and business relationships (which can be so intertwined as to be indistinguishable) do not transfer directly from one culture to another. These "filters of a family kind"

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are not only culture-bound but also highly personal. If they are cloudy, obscure vision, and lead to foggy or false interpretations, cross-cultural effectiveness is limited on both sides. In the absence of knowledge, our natural tendency is to default to the familiarity of our separate cultures (Adler, 1991, p. 88), thereby losing the opportunity to learn. While American monolingualism contributes to such breakdowns, it is by no means the only cause of them.

How Family Orientations Act as Filters

To develop a systemic, meta-cultural view of family orientations acting as communication filters throughout the world, a synthesis of large amounts of information is required. Investigators turn easily to studies in cultural anthropology and organizational culture. There are other rich and perhaps less ritualized sources, which can only be intimated in the space of this review.

Culture Theory. Accustomed to nuclear families, blended families, families headed by single parents and a variety of other arrangements, the geographically mobile American may have great difficulty understanding the depth of involvement Asian family members have with each other and with their communities. The Chinese path, for example, builds on ever widening circles of familial relationships, from household to clan to society (Boulding, 1988, p. 68). As Hofstede notes in his work on empirically derived dimensions of culture, images and expectations regarding family help to explain the differences between national collectivist and individualist orientations. In China, family extends outward to encompass the entire nation. In America, individual family members are valued for precisely that -- their individualism. It is the difference between centrifugal forces that diffuse group related influences outward, like ripples in a pond, (e.g., in China) and centripetal forces that pull inward from the group toward the developing individual, as in the U.S. A third variant occurs in Japan, where only the eldest son remains in the household so that the proximity and influence of extended family is modified. Hofstede refers to this as the "lineal" family structure (1991a, pp. 50-51).

Bate (1990) believes that using the "ordinary native tongue of the client system" even if in a rudimentary manner is crucial in establishing reciprocity of ideas and a basis for working together. He views this as an exchanging of paradigms and an opening to "do-it-yourself ethnography." Visions of the desired state of an organization, propelled by collaborative self-study and paradigm awareness, can then move from the "sectarian divide" that often represents the status quo to the "integrative" and finally toward the "adaptive" organization that accommodates felt need for change (p. 99). Although Bate makes no mention of family orientation, he indicates that being even a limited part of the linguistic family of the host culture is a mark of respect and a demonstration of cultural sensitivity.

Mystery Systems. Family orientations are themselves derived from what Herzberg calls "mystery systems," which he believes humans are universally determined to create. In the West, he names Hellenism, Judaism, Christianity, and Islam as the predominant mystery systems, and in the East, he cites Taoism, Hinduism, and Buddhism. The reason for every mystery system, Herzberg states, is to provide a framework for four scientifically unanswerable inquiries: 1) Why me? 2) Whom do I turn to? 3) What should I do? and 4) Who am I? (1995, p. 245). Each mystery system conforms to the criteria of having staying power, being beyond rational analysis, and allowing human participation. It is against the backdrop of such mystery systems that the meaning and experience of human individuals and their families is played out, like the wayang kulit morality plays of Indonesian theater.

Organization Development Models. Chasnoff and Muniz have proposed a "cultural awareness hierarchy" to facilitate interactions in international or intercultural settings. At the base of the hierarchy (Level I) is deeper knowledge of self. Level II requires an honest assessment of technical/professional skills which, if lacking, no amount of cultural knowledge can overcome. Level III acknowledges the importance of factors "beyond culture;" that is, factors which are more circumstantial than cultural but which are often erroneously attributed to cultural differences (e.g., poverty). Awareness can then proceed to the fourth level of the hierarchy, where we confront and consciously accept the influence of our own culture and acknowledge culturally induced behaviors without feeling the need to use these as standards for measuring others. Level V recognizes the need to understand cultural features unique to our own country, not shared by similar cultures. At Level VI, the cultural differences we think we are finding

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may finally be explored and confirmed or rejected on the basis of further evidence and experience (1989, p. 131). Given the importance and complication of each level, impatience is hardly a virtue regardless of our cultural origins or family orientations. It may be that one of the hallmarks of successful multicultural organization development is the adjustment of contemporary American preference for instant results toward a long-range, multilevel, reciprocal development process such as Chasnoff and Muniz describe.

A comparison of assumptions about change (Marshak, 1993) makes direct reference to the ways in which American HRD practitioners may miss the mark in Asian countries where Confucian teachings overlay the Eastern mystery systems. Largely influenced by Lewinian organization development strategies which are linear, progressive, goal-oriented, and planned, we are not prepared to view change as Confucian thinkers do: as cyclical, proceeding through orderly stages, journey-oriented, and harmonious. The Lewinian position is that disequilibrial states are necessary for change, and that these are effective because they are unusual enough to force organizations toward a new state of equilibrium. In contrast, the Confucian perspective is that everything is naturally in harmony, and perfect. One acts "correctly" to restore harmony when it is disrupted, but such disruptions are a normal occurrence in a universe always in a dynamic state of change. Correctness reflects well on the family and the society, but confrontation is not harmonious and is discouraged.

Method of Inquiry

Review of literature regarding the practice of international HRD yields an increasing quantity of ethnographic data and researcher/practitioner assumptions about the influence of "families" of ideas and cultural values on multicultural work relationships. Writers have tended to develop general constructs or classifications describing contrasting cultural variables, speaking in terms of similarities in country clusters (Osman-Gani & Jacobs, 1992) and divergence in country cultural attributes. But references to the role actual human family and community systems play in determining the nature of work and how that work is interpreted are less available. Focusing on Asia in general and China in particular has narrowed the scope of this study but also raised further questions that, given the long isolation of China from the research community, are insufficiently answered. Researchers found relevant information in literature scattered across a wide band of disciplines that are not conventionally represented in the reading lists of HRD professionals. This in itself may help to explain why the impact of family systems in multicultural environments is still largely unresearched if not unnoticed.

The questions with which the authors began were framed by anticipation that models of professional preparation for undertaking HRD or other organizational leadership in international settings could be found, synthesized and interpreted. At the very least, the researchers hoped to determine what personal goals, characteristics, insights, or communication skills are needed by such leaders to make them successful in multicultural assignments. There was also an explicit assumption that mental sets or cognitive maps about family and individual roles and responsibilities would be a major factor in such assignments, and that both verbal and non-verbal communication would be filtered through schema that define for each individual what "family" is and how it impinges on work environments.

Findings

The additional avenues for questioning that have opened during the literature review are necessarily left for future study. The researchers offer only initial, exploratory findings, encouraging others to continue the search for ways in which an understanding of family filters can alter international HRD practice. For example, comparative studies of family structures and rules about education and work in separate Asian nations could be instructive. Because we are always relating new information to what we already know, there is a probable tendency to overgeneralize about cultures in the Asian spheres of influence and even about cultures within a nation as vast and variously ethnic as China.

The most salient result of the current study is confirmation from a variety of sources of the importance of recognizing the one-way cultural visions we bring to the workplace. Certainly as we enter the global HRD arena, we tend to take far too much for granted, short-sighted as we are by impressions

that our cultural lens alone cannot correct. We are particularly unable to see a multicultural work force as a collection of different family systems, with resulting orientations unlike our own. While we are aware of our common humanity, we do not know or understand what is going on in each other's minds and hearts and often do not know how to ask. The constraints and freedoms we think everyone should have may appear as bondage to other people, who value harmony, filial piety, and uncertainty avoidance and who are convinced from head to toe that the good of the family, the community, and the country take precedence over fulfillment of individual capabilities and desires. These findings and findings in other relevant categories are reported and referenced below.

Qualities Global HRD Leaders Need. An interesting study regarding the qualifications of international developers (not limited to HRD professionals) reports the following:

> Research on the effectiveness of overseas development workers suggests that, in general, women rate more highly than men on the skills and attitudes said to be associated with overseas effectiveness... Among the gender differences...are that women express less concern about status or advancement (while men place higher value on upward mobility); women express a greater predeparture desire for contact with the local culture, and overseas are more involved in the culture; women place more value on and devote more time to learning the local language; women express more liberal attitudes toward development and are seen by their peers as being more caring of others; and that while women admit to experiencing greater difficulty in adjusting to a foreign environment than do men, they also report greater professional satisfaction. (Wilson & Whitmore, p .61).

This is not to suggest that men who are comfortable with change and with nurturing roles would not do equally well, but does emphasize the interpersonal relationship-building that is crucial to success. Another researcher offers a German citation claiming that:

> The "one-world-manager" should, according to a member of the Volkswagen board of directors, Martin Posth, "become submerged in foreign cultures and thus come to study them; be able to think within the framework of the foreign culture; have a high level of frustration tolerance; be competent in conflict situations; create synergies and make compromises; be politically sensitive....." (Bolten, 1993).

The researchers conclude that these and similar descriptions of what it takes to be effective expatriates in international settings indicate the need for self-acceptance and acceptance of others, emotional maturity, curiosity and the desire to learn, well-honed coping skills, and a willingness to suspend judgments about the new culture. They seek knowledge about cultural norms in order not to violate them personally or organizationally, because they care. Additionally, Vance & Ring (1994) recognize the obligation of the employing organization to assist indigenous workers with knowledge about how to work with expatriate personnel.

All of this is more easily said than done. A primary way to reach a respected level of cultural sensitivity is to seize every opportunity for collaborative exchanges between indigenous workers and U.S. expatriate workers. Whereas Chinese workers will constantly defer to the higher authorities in their work hierarchy (Hansen & Brooks, 1994, p. 63), they are relationship oriented, appreciate good listeners, and are direct in negotiations. Those who work in Japan find that "reading" Japanese opinions in multicultural interactions is somewhat more difficult (Keijzer, 1994, p. 19). Clearly, when we work in "the East" we do not refer to monolithic culture. As an American woman who went to live in Indonesia with her consultant husband reports, "Indonesian concepts of space, time, and things that matter are much different than we could have imagined. This was probably the hardest part of our stay here -- to understand what was going on and to have the patience necessary to view the situation in a new way...The orientation is around people [not convenience, efficiency, time, or privacy]" (Williams, 1987). She reports three levels of conflict resolution that she experienced, each oriented toward restoration of harmony, even if the Indonesians were the originators of the disharmony in the first place.

More About Cultural Understanding. The global HRD leader needs two fundamental pieces of knowledge about how HRD abroad differs from HRD in the U.S. One of these is the recognition that HRD is a macro, central government planning endeavor in most countries that seek development. The concerns are not only for training, but for labor shortages, immigrant labor policies, literacy, and a host of other development issues that may not fall within the purview of HRD in the States. Ji Ma, a graduate student at Georgia State University, gives an example of this difference (1996, interview). She came to the U.S. armed with concepts and Pacific Rim experience from her work as HRD administrative assistant and project leader in the Ministry of Personnel in China. But she reports that at first she and her American peers simply did not have a common conceptual basis for talking about HRD. She also confirms that the second major block of information largely unknown to American graduate students in HRD involves the family and work orientations which either spring from or are reinforced by local mystery systems and centuries of economic, political, and social organization unlike our own.

Macy (1991) speaks of the co-dependent arising of all aspects of life, leading to the acceptance of mutual causality as a ruling idea in Buddhist thought. She views General System Theory in Western thought as coming closest to offering a comparably interconnected view of the world. As Olds (1992) adds, "The 'embodied unity of all things' and its moral significance are central to this [Eastern mystery systems] tradition" (p. 130). Ethics or "correctness" comes from aligning harmoniously with the total pattern, so that individual excellence contributes to but does not destroy the pattern. The wisdom and authority of elders and the hierarchy of relationships in the workplace are intimately bound to these world views. Taylor (1995) reports that the rights of elders in an Asian culture may reach all the way across the Pacific to determine specific decisions about what refugee grandchildren in the U.S. may or may not do. Filial piety is a strong inheritance from Confucian thinking.

In China, although Mao's Communism liberated women legally from many previous subjugations, harmonious fit of women's skills and goals in the new China are still at issue. Educated women have opportunities, but tend not to rise to management positions. Zhi and Hong (1994) find gender equity consciousness "comparatively low" (p. 534). Under the Communist Party, a mass organization representing the interests of Chinese women functions to mobilize women in community affairs and to help provide services to them and their children. But problems of unemployed women, illegal migrant workers, and prostitutes "are not being handled adequately" (Chan, 1994, p. 98). Chinese feminists, steeped in the value of harmony, seek to avoid polarization against men because they view this as demeaning and not a proper way to contribute to the society (Bulbeck, 1994, p. 102.) At the same time, a reviewer of two modern Chinese novels questions "whether the fictional Chinese New Women have really broken away from the restrictions of Confucian patriarchal hegemony" despite their struggles for autonomy (Chien, 1994, p. 33). Clearly there are "filters of a family kind" that all but overwhelm women's efforts to contribute as fully as they might in the workplace and the Chinese society. Stockman (1994) finds that one reason may be the lack of structural separation, under Communism, of women's community and family contributions from their broader contributions to economic productivity.

Summary and Conclusions

Performing HRD tasks in other cultures is --and should be -- a humbling experience, but also a dynamic and creative one. It requires a thirst for knowledge and a longing for relationship. As Cooperrider and Pasmore suggest: Shouldn't we " 'reframe' our thinking to allow the possibility that others know more than we do about creating sustainable futures and invite them into our inquiry as partners rather than subjects?" (p. 1053). Intellectual, professional, or cultural arrogance are the American exports no other culture needs. In Singapore, that engine of economic development so startling to the West, there is a saying that, without natural resources, "Our brains are all we have" (Magaziner & Patinkin, 1989, p. 46). In international contexts, it appears that our own American brains had best be put to use in building relationships , learning, and sharing insights, not telling others how things ought to be.

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Self-directed Learning in Organizations: An Analysis of Policies and Practices of Seven Resource Companies in Western Canada

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Nine of Foucher's 32 propositions about self-directed learning in the workplace are examined against the human resource policies and practices of 7 Western Canadian oil and gas companies with over 1000 employees.

Current wisdom, sustained by organizational observers, researchers and writers, posits that knowledge is the most significant resource of the post-industrial organization, and learning is its most important tool(Senge, 1990; Mink, Esterhuysen, Mink and Owen, 1993; Watkins and Marsick, 1993).

Mink et. al(1993) observe that "In a true `learning organization', everyone is encouraged to learn whenever necessary to improve a process, a product or a service"(p. 9). Workers who are continuously learning and developing are said to be the backbone of the competitive, effective organization of today(Watkins and Marsick, 1993, p. 25-29; Pedler, Burgoyne and Boydell, 1994, p. 4).

One of the hallmarks of learning organizations is the ability and freedom of employees to learn what they need to learn to do the job effectively. To some degree, this involves autonomy in selecting the content, means, time and location of the learning activity. This paper examines the results of a study of resource-based organizations in a Western Canadian city and examines the degree to which nine of the propositions about self-directed learning(SDL) developed by Foucher(1995), are upheld or contradicted by the data.

Methodology

Human resource development vice-presidents or senior HRD personnel of seven resource-based organizations employing between 1000 and 5600 people were interviewed. Each were interviewed about the organization's policies and practices relating to SDL. The sample was selected from a list of 14 oil and gas companies operating in Calgary, Alberta, Canada, which had over 500 employees. The study is part of a larger on-going investigation into SDL in the workplace by The Group for Interdisciplinary Research in Autonomy and Training(GIRAT).

A 39-page interview guide was used. This guide was developed by Foucher(1995), and was translated from French to English in 1993. The French version has been pre-tested in Quebec, and used to investigate over 30 enterprises. It was designed to test 32 propositions about SDL in the workplace developed by Foucher(1995).

The seven interviews using the English version were each of approximately three hours duration and involved two interviewers. The interview questions covered general organizational information, structure of the HRD system, formal organization, general data on training and self-directed learning, and links between worker learning and other human resource management activities.

In this paper, the research question addressed is: To what degree are Foucher's(1995) propositions about SDL in the workplace supported, modified or disproved by the data?

The Propositions

Foucher(1995) developed 32 propositions about self-directed learning in the workplace. These propositions relate to three dimensions of learning self-directedness: initiative; autonomy and planning. The propositions were initially developed from a literature review and a series of focus groups with

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human resource professionals, and subsequently submitted to a panel of ten experts specializing in training-related issues in the workplace(Foucher, 1995, p. 294).

This paper examines the degree to which the data gathered from the 7 organizations support, modify or refute nine of those propositions. Each proposition will be identified, and the relevant data will then be introduced.

Propositions One, Ten and Twenty-one. Three propositions relate to the control over content of employee's learning. Foucher's first proposition states

> The more the knowledge to be acquired by the learner is specific to the organization, the more the organization will tend to take the initiative for designing(or having someone design) and carrying out(or having someone carry out) learning activities tailored to its own specifications(Foucher, 1995, p. 302).

Proposition ten states that

> In times of budgetary restrictions, management tends to conserve initiative for those training activities that it considers critical. For less crucial training activities, it will depend more than at other times on employees' initiative(Foucher, 1995, p. 305).

Proposition twenty-one declares that

> Where an organization's management team considers important that a large number of employees acquire knowledge of a similar nature, learning activities will tend to be more planned.

There was considerable evidence to support these propositions. All of the companies had either begun, or were in the process of implementing planned change when the oil and gas recession of the late 1980's hit. Process re-engineering, strategic planning, and in some cases, especially at the plant level, variations of continuous improvement were being implemented.

The economic shortfall of the recession riveted attention on means to economize and enhance productivity. Five of the seven organizations put in place some kind of core competency program which was required of management, and sometimes, of all employees. These were variously labelled, managed and delivered. All were characterized by a set of specified courses, taught by contractors, or "cascaded" by internal personnel, to ensure that each targeted category of staff had the essential skills and competencies deemed necessary to ensure employees were more aligned with the organization's mission and to ensure "business results". Most contained skills in business writing, understanding the mission/vision of the organization, how to interpret the organization's financial systems, computer literacy, communication, and decision-making. In cases where teams had become prominent as a result of restructuring and process re-engineering, training in team functioning was highly visible.

At the same time, "superfluous" programs, usually related to "soft skills", were cut.

While individual discretion in regards to the pacing, location and time of learning existed in some cases, control over the content of these core competencies was not an option for the employees. The content was usually fixed by a team appointed by senior management. Delivery was most often managed by the HRD function in the organization. Sometimes, surveys or focus groups were used to establish this content, and even to get input on the instructional approach, but in the end, the content was fixed, and all targeted employees were expected to master the content and skills prescribed. Usually the method was prescribed as well. In-house offerings were made on a scheduled basis, and employees were expected to "make up" those areas which they had not "taken", or in some cases, to obtain them through external programs.

Proposition Two. Foucher proposes that

> The more homogeneous the acquired knowledge needs to be, the more the organization will tend to exert control by taking the initiative for designing(or having someone design) and carrying out(or have someone carry out) learning activities tailored to its own specifications(Foucher, 1995, p. 302).

The evidence cited above would also appear to confirm the basic intention of this proposition. Each organization seemed clear that employees required understanding of their organization's unique operations, vision, and goals. These could not usually be purchased "off the shelf", and each either used internal staff to develop the training, or contracted externally for consultants to develop such programs in consultation with the organization's appointed representatives.

On the other hand, some "canned" programs were purchased, and our informants referred to these. These tended to be the more generic skills such a communication, team functioning, or leadership. Nonetheless, these courses were mandated for employees, and in two cases, a system to ensure that each member of the targeted population received the necessary training was mentioned.

Propositions Four and Thirteen relate to the issue of specialized and complex knowledge. Foucher's proposition four states that

> The more complex and specialized the tasks carried out by employees, the more the organization will benefit from employees taking the initiative for designing(or having someone design) and carrying out(or having someone carry out) the learning activities(Foucher, 1995, p. 303).

Proposition thirteen also relates to task complexity and specialization:

> The more complex the tasks performed, and the more they vary from one workstation to the next, the more employees will be in a position to make choices about their learning goals and the content of the learning activities(Foucher, 1995, p. 307).

The energy industry tends to be dominated by professionals and scientists. Six of the seven companies were Canadian head offices which contained the major head office functions of exploration, research, transmission, product development, refining, finance, marketing and human resources. Field and plant functions, such as drilling or refining operations, were located elsewhere, sometimes in other countries.

Several of the interviewees spoke of how much of the learning of the professionals, and especially those who were in research and development, was self-directed. All of the seven companies employed many specialists whose job it was to discover gas and oil and to develop and market petroleum-related products. Computer specialists, geologists, chemists, engineers and geophysicists were especially involved in these settings. For example, 70% of the staff of one of the smaller companies examined held one degree, and 20 % held two or more degrees. Although this kind of data was not collected on all companies, this profile would be typical.

These professionals and scientists were probably some of the "purest" knowledge workers to be found. They were involved in applying knowledge to complex problems where known procedures and knowledge may not be helpful, or where judgement and unique applications of this knowledge was demanded. Our informants reported that these professionals learned through attendance at professional conferences, through reading, discussion with other colleagues and through working on problems. Knowledge was their mainstay, and they were often creating this knowledge as they went.

Equally important, these professionals worked in sub-cultures in which discovery and new ways of thinking were supported and valued, sometimes in research laboratories or field trials. They guard their freedom to discover and learn independently(Kilcoyne and Volpe, 1991).

The available data from this study cannot confirm or disconfirm whether or not the organization will benefit from employees taking the initiative for their own training, nor whether the organizations prompt employees to do so, as stated in proposition four above.

Support is found, however, for proposition thirteen, in which complex knowledge which is unique to those professionals is more likely to be gained through independent means, rather than through organizationally-imposed learning activities.

Proposition Five. The data generally support Foucher's fifth proposition:

> In organizations where management has difficulty assessing training needs, either because of low span of control or the presence of highly individualized tasks, employees will be encouraged to take initiative for their own learning. They will be

> asked to select appropriate activities, and in some cases, to carry out these activities(Foucher, 1995, p. 303).

Much of the work of these professionals requires informal learning through reading, problem-solving, and discussions with colleagues, which by nature involves a higher degree of learner control over timing, pace, location, content and learning methods.

Whether or not the organizational culture supports and values self-directedness, the complex and specialized knowledge required to complete their tasks makes it difficult for supervisors and senior management to judge what, when, or why knowledge is needed. By default, this often leaves the professional in control of the required learning activities.

The intentionality implied in this proposition (`employees will be encouraged to take initiative' and `they will be asked to select appropriate training activities') is less evident. It would seem that self-directedness often "comes with the turf" of being a professional, and management may have limited control over some aspects of professional learning.

On the other hand, management does control the common core business learning activities of these professionals such as computer literacy and financial awareness/management, as indicated under propositions one, ten and twenty-one.

Proposition Six. This proposition states:

> In organizations that support learning, and where the organizational culture is favorable to training efforts, employees will be expected to take more initiatives towards their own training than in comparable organizations where learning is given a lower profile(Foucher, 1995, p. 305).

Only one of the companies had formally committed itself to becoming a "learning organization", and this effort was spearheaded and fully supported by the CEO. Preparations for organizational transformation were just beginning at the time of the interview. It was clear, however, that while it was anticipated that employees of this organization would be expected to take responsibility for their own learning, even in this case, a considerable number of mandatory training events were planned. Selected managers were being trained to provide core skills deemed necessary by the organization to become a learning organization. Thus, even in a learning organization, one can expect that employees will have limited choice of learning activities, given that much of the initial energy will be directed at the core competencies.

Proposition Fifteen. Foucher states

> The more importance an organization ascribes to the knowledge acquired by employees(for security reasons, or out of concern for quality, for example), the less employees are likely to be given a choice as to what learning goals to pursue, or to what activities to undertake(Foucher, 1995, pp. 307-308).

The findings reported under propositions one, ten and twenty-one would also tend to support this proposition. Other data also support this proposition. All companies reported that they were obligated by law to train certain employees according to various government regulations including fire procedures, hazardous materials handling, and employee health and safety procedures. All seven companies had union contracts which set conditions for training of union members, although the number of union contracts varied considerably between companies.

Viewed from the perspective of employee autonomy in learning, it becomes apparent that legal and contractual arrangements mediate this autonomy especially in terms of content, but often in terms of learning method.

Conclusions

It becomes apparent, based on these 7 cases, that the autonomy of learners in the workplace is highly modified by the organizational context. In many cases, this is to be expected, inasmuch as by definition, organizations are collectives to achieve specific goals. However, given the amount of control which

organizations seem to exert on the learning agendas of their workers, one might question the validity of the conventional wisdom that worker self-directedness is either possible, or even appropriate. Furthermore, one needs to question whether the concept of self-directedness, arising from ideological roots and embraced by some adult educators, is an appropriate model for examining workplace learning. On the other hand, if there turns out to be a relationship between employee creativity, productivity, and autonomy, then it would appear that these companies' policies and practices may be actually inhibiting their competitive edge.

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Designing the Learning Potential of Jobs

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Learning at work requires that the workplace fulfills certain conditions in order to qualify as a strong learning environment. In the paper the model of the learning potential of jobs is presented. Conditions and characteristics of task groups as an effective strategy to enhance learning possibilities of job content and work environment of production workers are discussed.

The learning potential refers to the likelihood of learning processes occurring in a particular job situation (Baitsch & Frei, 1980). Learning processes and the development of competence depend on specific combinations of characteristics of workers and of work. Workers skills and qualifications (formal education, work experience, learning skills), their ability and willingness for self-directed learning and for developing competence determine the way they see and use learning opportunities on the job. The occurrence of learning possibilities depends 1) on characteristics of the job and the working environment (complexity and variation of tasks, cooperation, control, autonomy) and 2) on the amount of organized training on-the-job. In this paper emphasis is laid on the first dimension.

Learning possibilities on the job can be promoted by redesigning jobs contents and making jobs more complete and complex. By including innovative tasks 'learning events' can occur at the job, which ask for (collective) problem solving, planning and discretion space. The work environment as a second major field of learning opportunities can also be developed. Colleagues and supervisors giving feedback and explanations, information sources, including computers, available at the job and material clues can foster learning and adaptation to (and of!) the task.

Autonomous task groups are becoming more and more the basic unit of production, rather than the individual worker (De Sitter, 1990). They seem to open up promising roads to learning at work both on the level of the job and on the level of work environment, as was revealed in a recent literature search on good practices with regard to on-the-job learning in six industrial countries (Onstenk, 1994; 1995a). Empirical references in this paper are taken from this research.

The Learning Potential of Jobs

OJL requires that the workplace fulfills certain conditions in order to qualify as a strong learning environment (Onstenk, 1994, 1995a, 1995b). Adopting and developing the terminology of Baitsch and Frei (1980), these can be analyzed in terms of the learning potential of jobs (see fig. 1). The learning potential refers to the likelihood that learning processes will occur in a particular job situation. This likelihood depends on 1) the available skills and learning abilities of the employee; 2) the willingness to learn of the employee; 3) the learning opportunities on the job and the 4) availability of training on-the-job, including 5) relationships and mutual influences of these factors. Learning processes and the development of competence, result from the specific combination of the workers skills and qualifications (formal education, work experience, learning skills), their ability and willingness to learn and develop competence and the learning possibilities on the shop-floor (tasks, cooperation, control, autonomy, training policies, organizational change etc.).

The model of the learning potential is both a descriptive and a conditional model. As a descriptive model it states the influence of characteristics of the different dimensions on the likelihood of learning. This depends both on the dimensions itself as on their interrelationship and interaction. Learning occurs in an interaction between employees and the opportunities for learning presented by the job, mediated by skills and receptiveness to

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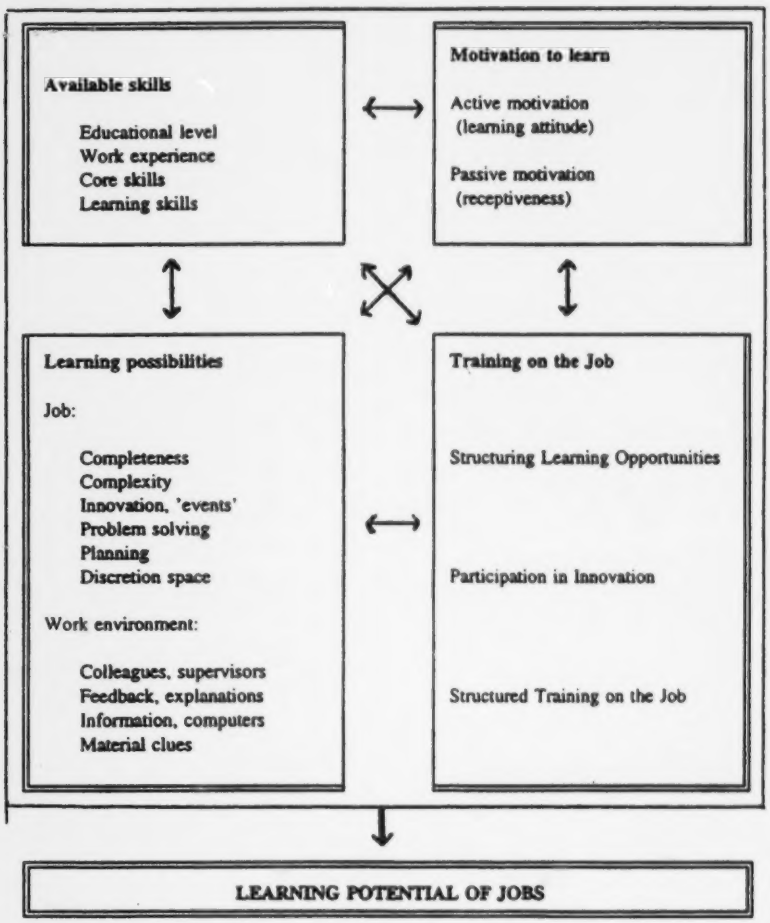
learning of employees. Learning opportunities on the job can be subdivided into the characteristics of the job and the working environment itself as an element of the learning process (OJL) and training on-the-job.

Figure 1 The learning potential of jobs



(Source: Onstenk, 1994, 1995a)

Learning Possibilities Learning possibilities depend on characteristics of 1) the job content and 2) the work environment. With regard to the *job content* (scope and variation), the amount of problems to solve and the autonomy to deal with these problems are essential. Jobs differ greatly in content and variation. A company has a lot of organizational choice in this respect: the same kind of job can be designed in different ways, allowing for more or less learning opportunities. Learning possibilities can be enlarged by putting people in different posts in the production process, enabling them to broaden the range of skills, which can be themselves still rather narrow (multi-skilling). Much more effective and consequential is a redesign of jobs whereby complete jobs are created: jobs which include preparing, executing, controlling and steering tasks (Projectgroep WEBA, 1989). This enlarges greatly the chance that people in their job meet on a regularly - and recognized ! (compare Kusterer, 1976) - basis new situations, problems and 'events' (Zarifian, 1991), in which they can learn about new methods, technologies or products. Work problems become learning problems, when existing solutions are not effective and new ones do not yet exits (completely). Encountering serious work problems, developing interest to solve it and having the opportunity to reflect on it are strong incentives to learning (Engeström, 1994). The only way to learn by solving problems is to actually have enough autonomy, means

and support to be able to solve the problem. An organization must stimulate and accept searching for answers, including the possibility to make mistakes. Employees should be allowed to experiment and take the relevant decisions. The organization must guarantee the conditions for this. Employees must have so much influence on order, tempo, methods and task variation which is needed in order to solve the problems they have to solve meet in the job. If problems cannot be solved alone, it must be possible to look for support by colleagues or support staff (Projectgroep WEBA, 1989). If these conditions are not met encountering a problem does not result in learning but in stress (Karasek and Theorell, 1990).

Job environment Also the job environment can be more or less inducing to learning. Several dimensions can be distinguished: physical characteristics; the availability of information; the amount of collective and mutual learning. Learning strategies used on the job are specific and situation-bound. They are determined by the attempt to handle the job with minimal efforts and maximum results. Available information and clues, given by social and physical work environment, are actively used. Warehouse employees carry out in high speed complicated orders by making use of standardized sizes and numbers in packages and of dimensions of stacks of stock. If complicated arithmetic skills like these are measured with academic, school oriented tests, they score very low (Scribner, 1984; 1986). Another example is the importance of sensory perceptions in processing industries. When jobs are informatized the labor process becomes more abstract and less physical characteristics are observable. Modern warehouse employees are not able to see the actual stacks from behind the screen. But design and soft ware can take a need for recognition into account. Also informatization makes available a lot of visualized and systematized information, job aids and simulations in many jobs. These are primarily designed for solving production problems, but can be used very well for the support of learning (Verdonck, 1995; Raizen, 1991).

The most important dimension of the job context as learning environment connects closely to the problem richness of the job and refers to learning of and with others. Social clues for learning/problem solving are given by experienced colleagues, experts and supervisors. Collective problem solving, giving and taking support and feedback, but also telling work related stories, are strongly favoring learning (Raizen, 1989). Experienced colleagues and supportive supervisors must be there and they must be accessible. Mutual learning can be organized in quality circles or weekly work meetings, where employees and supervisors discuss daily work problems, aiming at improving performance and solving problems. But also a lot of learning is done in informal talk during coffee breaks. Research shows how repair mechanics of copier machines solve problems by discussing with clients and by telling 'war stories' in which specific machines and customers are discussed (Raizen, 1989). In this way participating in the community of practice (Lave and Wenger, 1991) is essential in developing competencies. Employees learn and 'teach' together solving complex, specific and situated problems. This is especially important because of the fact that the manual of the machines, produced by the company in many cases was not of much help. The amount of communication is not only important for the support of problem solving, but also for the development of giving meaning to working life and to develop the commitment which has gained such a high esteem in the learning organization. If critical-reflective learning is expected of employees the work environment needs to listen to and to make use of the proposals.

Training on the Job On-the-job-training (OJT), organized by the firm constitutes the second important opportunity for employees to learn in the workplace. It can be defined as intentional, structured and organized OJL. In theory, all dimensions of learning possibilities identified above, could be applied to OJT too. But in OJT learning is an explicit objective (for employee and company) and, to varying degrees, the organization, structure and management are geared to learning and there is an educational strategy underlying it. OJT can be regarded as a kind of continuum, reaching from a minimal educational intervention unto structured training. OJT concerns all those activities which are explicitly aimed at training employees by supporting, structuring and monitoring their learning. It is not always possible or meaningful to draw a strict dividing line between provisions for learning and

training in the workplace. The distinction between implicit and explicit learning is a question of degree. There is a continuum which ranges from learning in the workplace by OJT to off-the-job training. Training in the workplace includes characteristics of learning in the workplace, as well as characteristics of a training course. A distinction can be made between three main forms of OJT (Onstenk, 1994, 1995a):

1) the structuring of learning opportunities in the workplace (getting to know the job, job rotation);
2) participation in innovation and quality circles
3) structured training in the workplace (structured OJT).

OJT concerns a specifically organized activity, or series of activities, which is characterized by a planned structure, explicitly formulated learning goals to be achieved, a form of evaluation and a clear demarcation in terms of time. It ranges from minimal educational intervention to in-depth structuring. OJT may vary from giving an employee a particular job with a view to learning to structured training and explicit learning in places of work which are designed as a (multimedia) learning environment.

OJT is seen here as a dimension in the learning potential of jobs. From this perspective the focal point of attention is not the development of a specific training course (and using the work place to deliver it), but the use of organizational and pedagogical-didactical means to promote training embedded in on going learning processes on the job.

Learning as Interplay of Employee and Work Situation Much discussion on learning, training and HRD concentrates on organizing specific learning events. The model of the learning potential of jobs offers another perspective. we are not interested primarily in designing a course which happens to be delivered on the job, but we want to 1) stress the fact that any learning at the workplace is in fact part of a chain of planned and unplanned learning events. We also want 2) to concentrate on optimizing learning opportunities at the actual job. .

The concept of the learning potential differs from other definitions which concentrate either on job characteristics (Karasek and Theorell, 1990) or, more psychological, on the ability of individuals to learn. The model proposed here emphasizes the learning situation as a learner in a specific learning/working environment. Both dimension are important. Not any job offers the same amount of learning opportunities to every worker at any moment. This is not to deny that one job can have more or less learning opportunities than another, on the contrary, it is one of the aims of this exercise to pea for designing jobs which are richer in learning opportunities. On the other hand one employee is able and willing to learn more than another. But that should be no reason to make learning abilities the most important screening point or to expect improving learning in the organization (only) by enhancing willingness to learn.

The model proposes possibilities to enhance learning by aiming at the different dimensions. Measures and projects to foster learning should focus directly on shaping and changing the subjective (employees' willingness and ability to self- and work-directed learning) and objective (supply of learning opportunities; factors which either promote or impede learning) dimensions of learning potential, in order to qualify the workplace as a strong learning environment. Innovation of the organization and the labor process should be geared towards the learning potential of jobs. This includes broader jobs with learning opportunities; fine tuning of steering necessities (solving production problems) and steering opportunities (both in terms of autonomy and qualification); work environment inductive to learning (small work groups); strengthening training and teaching roles of managers and key workers. These however are only effective when they indeed 'trigger' learning activities either directly by posing challenges as indirect by stimulating employees to learn.

It is impossible to establish simple correlations between the particular features of a job, the learning processes and the intended learning effects, although obvious connections can be made. Learning opportunities are particularly dependent on the content and complexity of the work and on the extent to which the person is free to operate and take decisions autonomously and the scope for social contact. Situated and immanent learning processes may be reinforced by providing support and feedback, by emphasizing reflection and allowing room for personal experimentation and problem-solving, including the opportunity to make mistakes.

It should be stressed however that every job triggers learning, although not all learning will lead to desired results. A job with few opportunities to develop competence can have very powerful learning effects leading to learned helplessness (Leyman & Kornbluh, 1989). But also unskilled jobs can offer opportunities for learning although they demand no recognized skills. A lot of working knowledge (Kusterer, 1976) is demanded in order to keep production processes rolling. Recognition of prior learning and practical competence acquired in this way is very important when embarking on a training or learning trajectory with regard to new production concepts. Every learning intervention is intervening in an ongoing process of learning and sense making.

Learning in Work Teams

Redesign of work in order to improve competitiveness is on the agenda in a growing number of firms. Flexibility, Just-in-time and quality care are among the most important topics here. In new or transformed production concepts jobs become broader and multi-dimensional, decision making and latitude amplify, social contacts are becoming more extensive. Also the need to deal with information and information processing devices at the workplace (computers) is growing. As both complexity and work pressure are growing demands on skills and commitment of workers are rising. Change has become the norm in many work sites. So a need to continuous possibilities of acquiring skills are needed. Training can help, but can not do the job. Employees need learning possibilities during work. As follows from the model of the learning potential new production concepts offer major chances to improve learning possibilities on the job. This holds, albeit in different forms and qualities, both for sociotechnical and 'lean production' models. Design principles can be analyzed on the level of the individual job. In many cases however it seems more fruitful to analyze these changes at the level of the department or work group. It is typical for the new model that the (semi)-autonomous work group is made a central principle of organizational and at the same time as an important learning strategy. The taylorist model leads to a complex organization with simple and isolated jobs, steered by managers and planning specialists. The new model entails a relatively simple organizational structure, with complex and more complete jobs. Learning on the job entails multi-skilling, the level and quality of which depends from the content of the newly designed job itself and from the possibilities for situated learning offered by the social work environment (colleagues and supervisors). Introducing work groups as a leading organizational principle has several objectives, not necessarily reinforcing each other.

Primary Goals Although work groups are discussed here with regard to the work place as learning environment, it is important to stress that the first and most important objective in introducing small work groups is the productive function. The work group must open up opportunities for organizing the labor process more flexible, by integrating tasks and by making employees multi-usable so switching of tasks becomes easier. Production problems - which become harder to predict and larger in consequences because of smaller batch sizes, fast renewal of technology and products and the strive for continuous improvement - can be better solved when and where they occur. Employees need - and have opportunities to acquire - a broader view on the production process and on the place of their own work in the whole of the system. Also more opportunities are offered for discussing problems and mutual support in solving them.
Another important function of the small work group is work planning at the level of the work process itself. Employees can be put to work flexibly so absenteeism can be dealt with much easier. Sudden changes in product specifications can be dealt with, just like last minute orders. In this way decentralized planning as is made possible by modern information technology can be used to the maximum.

A second objective for introducing small work groups has to do with enhancing motivation and commitment. Small work groups are introduced in order to improve the quality of labor and to lower absenteeism. This objective has been especially important in the older attempts to introduce work groups. It is dominant in the USA. The small work group is supposed to solve motivational problems. Job enlargement and enrichment is not

so much aiming at improving the work process but at stimulating motivation, responsibility and self esteem of employees. In a later stage the group is also used to improve production. Working in small groups or quality circles is supposed to strengthen group cultures in the company. This form of organization in small groups is important in enhancing learning processes leading to socialization and developing social-communicative skills.

Small Work Teams as Learning Strategy A last objective, which is becoming more important recently, entails using small work groups as an explicit learning strategy. Roughly a distinction can be made between the small work group as strategy for improving individual competencies of employees and as a strategy for the strengthening of the organization (the concept of the learning organization). The small work group as a strategy for development of competencies is aiming at promoting learning of employees by job rotation and task enrichment, by collectively solving problems and by enlarging steering opportunities on the shopfloor and by the intensifying of mutual learning processes. The organizational principle of the small work group can also be geared primarily to process improvement, as is the case in the quality circle Japanese style. The most important objective of group activity is making proposals for improvement, for avoiding process problems and for the identification and elimination of 'superfluous' movements and actions. In this case there is not so much working together in a groups, as well as discussing problems in separate group meetings (in Japan often in free time). Occurring production problems, but also simple techniques for quality control (i.e. statistical methods) are discussed. Intensification of the working day and the elimination of learning opportunities in the work itself can be a result of this.

The small work group enlarges the learning potential by enlarging learning opportunities in the job. These may result from enlargement or enrichment of the job. In many cases in introducing small work groups the job is not only broadened by learning to perform more tasks, i.e. by rotation to the work posts within the group. Also enrichment takes place by the integration of simple repair and quality control tasks in the job. In order to make possible solving problems at the spot both the necessity to make steering decision and the authority to do so at group level is enlarged.

In production functions job rotation is (re)discovered as a learning route for multi-skilled expertise. By rotation over the different work posts within the small work group this routes can be organized well. In a period of some months or years a combination of introductory training and a period of practice in the job can be repeated several times, for new jobs within the small work group or production line. This system is not yet diffused widely, although there is a steady growth. Several examples can be traced in which a well paced training trajectory and differentiated work levels are neatly connected and where every employee can learn by doing at his or her own level.

Small work groups also enlarge the learning potential by reinforcement of collective learning processes in the group. Employees cooperate more and more closely, exchange information or discuss planning of work, work problems and opportunities for improvement. This is true both for autonomous work groups (the Swedish model) as for the lean production group (the Japanese model). An important aspect is the structural enhancement of opportunities for mutual learning. Employees learn each other the tricks of their work post in the process. Problems are mutually discussed. An important learning effect can result from collectively discussing problems and improvement proposals by experienced workers form different departments and professionals (designers and planners). In designing small work groups this dimension can be explicitly be regarded by combining employees with different qualifications (content and level) in the work group. This is of special importance when integrating tasks form different areas (i.e. integrating mechanical maintenance and repair in the work of electrical engineers or operators).

Another important learning possibility is the establishment of representative responsibility. In many groups there is a post of group representative, which can be formally described (as in the Japanese style work groups) but which also can be rotating, as in the more autonomous work groups. In this kind of tasks social-communicative as well as planning skills can be developed and also insights in the whole of the production process can be attained. This of course implies that pay-systems and personnel ranking systems are tailored to this kind of responsibilities, which in many case the are not.

Probably the most important contribution for the learning potential of the small work group is the enlargement of the opportunities for the making decisions and for solving occurring problems in the own job. Characteristic for the small work group is the collective planning of the work and the solving of problems. The need and the latitude for employees to take decisions are enlarged, in which the collective competence of the group can be used and developed. Work meetings or quality circles can play an important role in this respect.

Problems and Risks The small work group as learning strategy is probably best instrumented in Germany and Sweden, although mainly as model projects. It is less clear to which extent model-projects influence actual changes of companies at large scale. The establishment of experience-led work structures and installation of small work groups is connected to the design of models for initial and adult vocational training (Weiterbildung), but with little connection to the actual work. The learning isle often remains an isle in the production process itself. There is a lot of experience with designing new models, in which quality of labor and quality improvement of the process are mutually reinforcing, but the real problem seems to be the implementation on a larger scale. The learning organization seems not to learn that much from the neighboring firm, although especially the Swedish programmes pay attention to this aspect in emphasizing regional exchange projects.

Small work groups offer more learning opportunities to employees. At the same time however they demand more from people. Improvement of the quality of job, combined with a rise in level, can enlarge the risk of being replaced at one place and being put to work in another job of poor quality elsewhere. So it is important that not only learning possibilities at the job, but also learning abilities of employees have to be enlarged. Employees have to learn to participate in group processes (communicate. cooperation) and to recognize learning opportunities. Both are a necessary pre-condition for learning to take place (and also to do the job!). OJL is structured by the organization of labor, but also by guidance and support of the learning process by managers, trainers and colleagues. Learning and learning opportunities depend not only of the design of the job, but are also closely connected to changes in style of leadership and responsibilities, to the trajectory of change and more generally to skill formation processes in the company. The consequences of this for the integration of a welfare policy in the company policy as a whole are still not enough analyzed. In Germany, Sweden and the Netherlands models and experiences are found where employees are actively involved in innovation processes and redesign of work.

In many cases qualification processes are not central. A tension with formal qualification trajectories can be expected. Training by rotation or mutual support can be threatened by work pressure or personnel shortages. Attention should be paid more to the role of managers as 'facilitators' of learning processes. The same is true for the development of and instrumentation of the 'colleague as trainer'. In many cases learning and teaching of colleagues is at the same time expected and hardly recognized as a specific task. Facilities are lacking. Supervisors and management often still lack imagination for an integration of learning and working or feel threatened by a loss of control.

The small work group reinforces a tendency to de-individualization of labor relations, which includes job description and qualification demands on group level and a corresponding pay structure. Processes of social closure can occur in order to guarantee a homogeneous social structure and facilitate communication and consensus. Also groups can internalize control and discipline with regard to members which can exceed demands made by a manager, because of the lack of countervailing power.

Concluding Remarks

Actual results in terms of acquisition of skills and competence of job rotation and working/learning in the small work group are judged very differently. The quality of OJL depends on the sequence of problems and 'critical events' (Zarifian, 1991) occurring in day to day work practice. So differences in design and organizational choices in the same job and work process can have large consequences for learning opportunities. A development of higher skills is possible, when maintenance tasks or quality control are integrated in the job. In autonomous tasks groups workers are invited to more autonomy and to discuss

problems and improvements with designers and planners. But learning in the group can also be restricted, as in lean production concepts, to learning a series of low level short cycle tasks just by mere repetition. 'Continuous improvement' is restricted to details, leading to more efficiency and avoidance of unnecessary movements, in many cases leading to higher work pressure. In this case there is a broadening of the available range of low skills tasks, which enhances the flexibility of production and usability of labor power, but not the level of competence (and the market value !) of the employee.

Autonomous task groups can open up many learning possibilities. Multi-tasking, decision latitude and ample opportunities to work together and talk together about production problems enhance required skills as well as the learning potential of jobs. The organizational context must however develop and protect these. A very important problem can be the integration of OJL or continuous OJT in personnel- and allocation policies. The importance of personnel allocation policies in structuring learning opportunities at the job has been stressed. The optimal use of small work groups and multi-skilled jobs implies also job security, long term contracts for the core staff and clear career paths. Systems of job rotation are aiming at broadening of skills and the development of multi-usability. These systems should be connected to a career model, which opens up the opportunity to do more interesting and varied work, more responsibility and higher pay. This however can be contradicted by tendencies to make jobs more flexible, part-time and temporary.

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Neighbor-Teaching-Neighbor: A Case Study of the Reciprocal Relationship Between Work and the Worker

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Although community programs employ indigenous workers as peer teachers, little data exist on the reciprocal effects between this work role and the workers' identity, self-respect and perceived career path. With semi-structured interviews, this study of five black women working as peer teachers in their public housing communities illustrated that working in this new work role gave the women tangible skills, a positive identity and improved self-respect, although they remained uncertain about their career plans.

The qualitative dimensions of community-based health promotion programs that involve an interactive social process between the lay teacher and community residents have often been overlooked. These include the well-known reciprocal relationship between the worker and the job, and the empowering effects of full-time employment on previously unemployed workers from minority communities. Prior to this study, little information was available about the subjective experience of the African American women who underwent the transition from unemployed resident of a public housing community to the role of paid health counselor for their neighbors in a Washington, DC health promotion project. Little was known about their personal perspectives of their new work role; the impact of this work experience on their identity, professional growth and development; and their expectations for working in the future. Such data can have important implications for organizational models built upon neighbor-teaching-neighbor in minority communities.

Background

In minority communities in the US, early community organization models were sparked by the self-care, civil rights, and women's movements which, according to Bracht (1990), "demanded a transfer of authority and resources to people previously beholden to others" (p.37). The newer, more interactive models of community involvement were based on the models used successfully in rural communities by the Agency for International Development, the Peace Corps, the World Health Organization, and on Knowles' concepts of andragogy (1980). Knowles conceptualized communities as learning laboratories in which individuals learn to deal more effectively with their problems and communities, as organisms, learn to solve community-wide problems. "The key spirit of the whole enterprise is self-help" (Knowles, 1980, p. 150).

According to Bracht (1990), the prevailing trends in minority health programs acknowledge the fundamental premise that change in minority communities is most effective when the people it affected were involved in initiating and promoting it. This involvement included active participation in defining the problems, planning the steps to resolve the problems, and developing the type of structures that would maintain the desired changes (Green, 1986; Green & McAlister, 1984). The U.S. Department of Health and Human Services' report of the Secretary's Task Force on Black and Minority Health (1986) reiterated these points when it emphasized that "plans for intervention will be stronger and more effective if they are initiated by groups familiar with the community's culture, traditions, and language and that can mobilize local

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resources and networks for resolving particular health problems" (p. 283). The recommendations made in the Secretary's Task Force strongly emphasized the critical role of established community networks, organizations, and lay workers in planning community health programs, disseminating health information, and in stimulating behavioral changes that lead to a healthier lifestyle and a lower risk of chronic disease. The newer programs now operating in minority communities are based on the therapeutic helping model in which the peer counselors receive training and then encourage healthy behaviors among the people in their neighborhoods or natural social network. Adult peers and colleagues can thus help one another learn in an atmosphere where the identification between learners and their peer counselors provides support and motivation for learning.

According to Riessman (1965), there is long-standing evidence from clinical work, field studies, and experimental paradigms that this learning approach based on peer learning or colleagues teaching one another can be successful. This approach is based on research that dates back more than thirty years to the work of Arnhoff (1954); Cronbach (1960); Rioch et al (1963); and Rogers (1967). Rogers' classic descriptions of the helping relationship also revolved around the central theme of reciprocity. He said, "if I am to facilitate the personal growth of others in relation to me, then I must grow, and while this is often painful it is also enriching" (Rogers, 1962, p. 51). Rogers' simplistic concept of reciprocity in helping relationships is a contemporary extension of the concept of identity, which has its roots in symbolic interactionism (Bryson, 1945; Stryker & Statham, 1985).

Much contemporary research has been focused on the implications of symbolic interactionism in relation to work and its role in adult development. A large body of data (Kohn et al., 1983; Miller et al., 1979; Mc Call & Simmons, 1978; Rosenfeld, 1990; Stryker & Statham, 1985; Coles, 1976) suggests that the structure of work and social roles shape the self, particularly over the short-term; and features of the social, psychological self motivate people to certain types of work and work roles, especially over the long-term.

An extensive body of research by Kohn and Schooler (1973, 1982) also suggests that there are reciprocal effects between working and both intellectual flexibility and personality. In their 1978 longitudinal study of the reciprocal effects of complex work and intellectual flexibility, Kohn and Schooler found that over time, individuals' occupational conditions both affect and are affected by their psychological functioning in that work role. In their 1982 study of work and personality, they found that learning on the job also affected the workers' off-the-job realities. All three dimensions of personality used in their study--ideational flexibility, self-directness, and distress--affect job conditions, and all three dimensions affect one another as well. In the dynamic process of working, the worker's personality, as well as his cognitive ability, affects and is affected by his work role.

Generalizability of such results, however, is a major methodological problem with most research studies conducted on the reciprocal relationship between work and self. This limitation is a direct result of the homogeneity of the study samples, which are predominantly white, middle class men and women. Robert Coles' study on work and self-respect (1976), however, included both blue collar men and women, and Goodwin's 1972 study focused on work orientations of low income people. There are also reports from Brooks (1984), Davis (1983), and Gilkes (1980) that document the identities of black working women as community workers, church sisters and race women.

The nurturing and counseling by black women in their communities, and the counseling and teaching provided by the women who serve as health advocates in the Washington, DC, program take place within a context of a helping relationship similar to mentoring, which has its roots in Greek mythology (Bell, 1987, p.14). The work of Kram and Isabella (1985), who suggest that peer relationships at work have the potential to serve the same functions as mentors, is relevant to this study. Although the primary goal of the mentoring by the health advocates in the Washington, DC, program is the reduction of risk of chronic disease and not career development, the relationship between the health advocates and their neighbors relies heavily on the principles and processes of mentoring. The health advocates teach, encourage, support, and befriend their neighbors who are trying to make changes in their diet and other lifestyle habits. They serve as

role models, advisors, trouble-shooters, caregivers and counselors in a manner that mirrors classic mentoring behavior in the workplace. In theory, they may achieve satisfaction and status as they begin this process of teaching and guiding, and their new role may influence their perceptions of their identity, their self respect, and their behavior.

This review of the literature suggests that the new work role called health advocate draws upon a solid theoretical base drawn from a variety of disciplines including social learning theory; andragogy; community empowerment; identity formation; symbolic interactionism; reciprocity; the essential conditions of helping relationships; mentoring; and the historical role of black women as change agents. This study is the first of its kind to use qualitative research methods as a means of making available the health advocates' experiences in their new work role and the meaning they attach to them. More than a record of those experiences--it is a study of neighbor-teaching-neighbor in public housing, that to paraphrase Denzin's (1989) words, opens the world of the health advocates for interpretation and understanding.

Methodology

The purpose of this study was to answer the question: what does it mean to be a health advocate? This qualitative study explored the experiential features of making the transition from unemployment to becoming a health advocate; perceptions of the new work role and its place in stimulating positive behavioral change within the community; and the impact of this work experience on the workers who were trained as the original health advocates in a health promotion project conducted in public housing communities in Washington, D.C.

The population for this study was a group of five African American women trained in the original group of health advocates and currently working in that capacity. After the participants signed a consent form, semi-structured, on-site interviews were conducted by the researcher. The interview questions were framed from a phenomenological perspective, and included but were not limited to areas such as employment and personal history; reasons for becoming a health advocate; descriptions of the work role; perceptions of personal change and learning; comparisons of expected versus actual change; and impact of the work role on future plans.

All interviews were transcribed personally by the researcher as a means of assuring a high degree of quality control and as a mode for initial review of the interview data. The researcher developed the coding system for the data, which was then sorted with WORD CRUNCHER, a text analysis software package.

Results

The subjects, age 20-61 years, were found to have common characteristics. All were black women who had lived in public housing, had been on public assistance at some time of their lives, and who reported a long history of informally helping others. The women volunteered for the new job of health advocate because it provided employment as a paid helper in their own community.

The interviews revealed the dynamics of the workers' helping roles that included being accessible in the community; providing health information; advocating for the residents with the health care system; and providing social support. Building a trusting relationship between the health advocates and the residents of the community was the prelude to the program's success. The study thus confirmed Rogers work (1968) that showed attributes of the workers to be more important than knowledge. The health advocates' warmth, responsiveness, openness, and a non-judgmental attitude were found to be critical to this process of health promotion. The interviews also revealed that working as a health advocate had the following effects on the women's self-reported health behaviors, self-respect, identity and perceptions of future career development.

Perceptions of Job-related Change: Identity and Self-esteem

In addition to positive changes in self-reported health behaviors, the experience of working as a health advocate had powerful, positive, empowering effects on the women's self respect, self esteem and identity. First, the women expressed a sense of pride in being involved in one of the first resident-directed programs designed to bring badly needed health promotion services to under-served public housing communities. Second, they reported that this feeling of satisfaction was greatly enhanced by the fact that they were working to help their community and their people. Third, they reported great personal satisfaction in working in a job in which they knew on a daily basis that they were helping others to become healthier. They reported great satisfaction from being able to apply their natural "helping" abilities to building a trusting and supportive relationship with many of the residents. This was also reinforced by the appreciation and respect paid to them by many of the residents.

The women reported feeling more positively about themselves in terms of learning and mastery. They had been exposed to a very large amount of new, highly technical information in their training courses. They expressed a sense of satisfaction about mastering this information, passing the course, and now being able to teach the content areas to others in the community. They expressed pride that they not only passed the course, but had also had acquired and would continue to acquire tangible new skills.

The women reported positive changes in the way they viewed their own identity. Having a job called "health advocate" gave these women a positive work-related identity. This work identity was one that "people in the community looked up to," an affiliation with a program that was recognized as beneficial for the community, and an identity which was something of which they could be proud. The most powerful description of the work role "health advocate" was the following:

> If somebody asked me what kind of a job I have, I say "I'm a health advocate." They say "what is that?" I say that I'm like Superman. You know Superman is not going to let you run in front of the bus and get hit! And that's like me, if I see you doin somethin that I know is not good for you, I'm not goin to let you continue doin it. I'm goin to come over there and tell you about it, talk to you about it.

The women reported positive feelings when they were asked about the nature of their jobs, and when their efforts were acknowledged by the residents. This included the first occasions when the residents began turning to them for assistance, and then later when the residents recognized them, called them by their names, and then returned to the health corner for more assistance and to say thank-you for helping them. The women also received positive feedback on their new work identity from their extended families and friends. They were not only acknowledged for having a job, but also for having a job that helped their communities.

Perceptions of Change: Financial Independence

Only one woman specifically mentioned the financial benefit from working. This woman, who was the only subject who had never worked previously, mentioned positive effects on her self esteem and respect from the financial benefits of the job. To this woman, a very important impact of her new job was her new self-respect and financial independence.

She said:

> I feel real good about myself. I feel good about myself when I get up in the morning. I say thank you that I got the job. And sometimes it feels so good that I just can't explain it. It feels good to be independent. I don't have to depend on a check every month. I never had a bank account and I got one now.

Future Plans for Professional Development

Despite the fact that their new work role had given them a new work-related identity, the women did not report any decisive plans for continuing professional development. Two women in the study are no longer working as health advocates. The health advocate who had hoped to attend nursing school has not done so. The two remaining health advocates appeared to be content with their current positions, and attributed their longevity in their positions (of more than three years) to their natural patience, their helping natures and their determination to succeed in their new work roles. They planned to continue their work as health advocates as they keep "learning more on the job."

Conclusions

The findings suggest that the neighbor-teaching-neighbor model of health promotion is a helping process that revolves around building trust. The study also confirmed that the women who worked successfully in the new work role made positive changes in their health behaviors and felt personally empowered by the experience of working as health advocates. They did not, however, perceive a clear career path and felt uncertain about their future.

Implications for HRD Practice

This study was the first qualitative study of a new work role in health education programs based in American public housing communities: the health advocate. The data from this study provided previously unavailable insights into the subjective experience of black women who have assumed this new work role, a role that is being replicated in health education programs in public housing communities throughout the US.

Accessing and understanding the subjective experience of an individual working in a new work role has implications for HRD practice. First, although the collection of quantitative outcome data makes an important contribution to program evaluation, such data cannot capture the experiential features of the work role and the meaning of the social processes that take place during community based health promotion programs. In this study, the subjective perceptions of the health advocates confirmed that employment as a lay teachers was as empowering at it was originally conceived. In HRD practice, interviews with workers can provide important qualitative information about worker's perceptions of adult learning and empowerment in the workplace.

Second, the findings of this study have important ramifications for the recruitment and training of future health advocates who will be placed in similar roles in other public housing communities, and for integration of the program into the routine life within the community. Such data can then be applied to the recruitment and training of workers who are working in newly created work roles, and to further refinement of the work role.

Third, this research provided community health planners and the White House Inter-Agency Task Force on Health Care Reform with data on the viability and dynamics of a new work role that has enormous potential for success in minority communities. Since the research was conducted in an all-black public housing community, the findings are not generalizable to other minority groups. Given the intersection of culture and human resource planning, more research must be conducted with similar workers from Native American, Hispanic and Asian communities. Such investigations would provide critical cross-cultural comparisons of the dynamics of this new work role.

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The "Outcomes" Challenge: An Action Learning/Critical Thinking Approach to Program Development and Evaluation

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The Minnesota Extension Service (MES), like other publicly funded organizations, continually needs to examine its ability to plan for, evaluate, and report its outcomes. This report describes an action learning/critical thinking approach to the redesign of organizational work around program outcomes that combines practice, reflection, and the development of new theory.

The Minnesota Extension Service is an outreach function of the University of Minnesota with the following mission:

> To involve people in improving the quality of life and enhancing the economy and the environment through education, applied research, and the resources of the University of Minnesota.

The issues facing citizens are increasingly complex, requiring higher level thinking skills, and an accountability system that includes an assessment of what was learned in the process of doing the work. The question is shifting from "what is it you have done?" to "what has happened because you have done this work?" Those who require this answer include:

- Government Performance and Results Act at the federal level;
- The performance benchmarks in the University's strategy plan where the state legislature has tied funding to performance; and
- County boards of commissioners asking for reports to show documented outcomes for the work of MES.

The political environment and desire to fulfill the mission required MES to develop a new approach to planning, evaluating, and reporting its programs.

Conceptual Frameworks

In many areas of its operations, MES is developing a more holographic approach to its functions of program development, organization development, and staff development. In contrast, a more traditional approach to the "outcomes problem" would have taken the form of a group of subject matter experts revising the system, developing the material to be taught, and delivering training to the appropriate employees. In the holographic approach, the development of the staff, the organization, and the program planning process become so intertwined that the three processes are frequently indistinguishable from each other. Based on the conceptual frameworks of critical thinking, action science, and systems theory, this project demonstrates the results of a group of employees across all organizational functions connecting theory to practice in an evolving cycle.

Critical Thinking. Richard Paul (1995), from the *Foundation of Critical Thinking*, states that "thinking is integral to the nature of content and...it is thinking that gives life to content. He describes the process of critical thinking:

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> Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on the universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision,, consistency, relevance, sound evidence, good reason, depth, breadth, and fairness. It entails the examination of those structures or elements of thought assumptions, concepts, empirical grounding: leading to conclusions, implications and consequences, objections from alternative viewpoints, and frame of reference. Critical thinking - in being responsive to variable subject matter, issues, and purposes - is incorporated in a family of interwoven modes of thinking, among them: scientific thinking, mathematical thinking, historical thinking, economical thinking, moral thinking and yes, even outcomes thinking.

Stephen Brookfield (1987) adds, "Being a critical thinker involves more than cognitive activities such as logical reasoning or scrutinizing argument for assertions unsupported by empirical evidence. Thinking critically involves our recognizing the assumptions that underlie our beliefs and behaviors. It means we can give justifications for our ideas and actions." This is why it is important that an organization like the Minnesota Extension Service has a shared and stated mission, vision and even leadership values. This is a way to frame the work of an organization where employees, participants and funders can use critical thinking skills in choosing the direction of the work.

Brookfield also says "Critical thinking is a lived activity, not an abstract academic pastime." The structure used to provide support in doing program development, evaluating, and reporting needs to incorporate ways to think critically into its processes. This reflection needs to be a learned behavior that becomes part of the daily routine of the organization's life.

Action Learning. Thinking about thinking is closely tied to the second framework, action learning. Grounded in the action science theory of Chris Argyris and Donald Schon (1978), action learning guided the process, with critical reflection as an essential component of learning and organizational change. With its roots in action research, the goals of such a process are threefold: (a) to improve a practice; (b) to improve the understanding of the practice; and (c) to build an understanding and responsiveness in the organization to support change of the practice.

Argyris and Schon stress the importance of identifying the underlying assumptions and values (theories-in-use) that drive the practice that is to be learned about and changed. Without this understanding, new practices are not likely to be incorporated beyond a superficial level. Critical thinking and reflection processes guided the discovery of assumptions.

Systems Theory. Gareth Morgan's work with single and double loop learning and the application of systems theory to holographic organizational design also informed the staff development/organization development process. The example of a thermostat is often used to explain the workings of a simple system (See Figure 1).

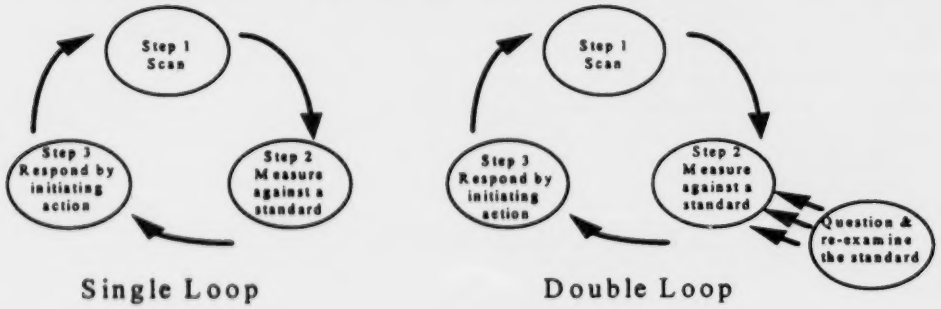

Figure 1

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A thermostat has three operations: to scan the environment, to compare the results of the scan against a predetermined standard, and to adjust a furnace or air conditioner in response to the second step. Translated to a learning framework, content is taught, the outcomes and standards for learning are preset, and the learning is measured against these standards.

The second, or double, loop is a modification of step two of this process. Instead of simply comparing results against a preset standard, that standard is continually examined against ever-changing contextual conditions. In the thermostat example, the energy crisis of the 1970's necessitated questioning of the 72 degree norm for air temperature. Government research centers, organizations, and families did their own formal and informal research into what temperature made sense for each setting. In a learning framework, the double loop process involves continual re-examination by all stakeholders of the outcomes and the process of the learning. This examination is done by allowing for and inviting environmental factors into the process, in the context of an action/reflection cycle where new knowledge evolves through critical reflection on action.

Research Questions

The process was designed with the following questions:

1. Can an action learning/critical thinking approach to learning result in
   (a) a more effective means of program development,
   (b) a more realistic and useful system of evaluation and reporting, and
   (c) an organizational shift that will support the new process?

2. Is there a more effective way of conceptualizing and operationalizing outcomes work?

3. Will this learning approach be generalized to other content areas and organizational change processes as a result of participating in the "outcomes" application?

The background and impetus behind each of these questions illustrates the need to move to a more integrated approach to the program, organizational, and staff development functions in the organization.

More Effective Means of Program Development. Historically, Minnesota Extension Service had a mission that related to information dissemination or technology transfer. The current mission, as stated earlier, is "to involve people in improving the quality of life and enhancing the economy and the environment through education, applied research, and the resources of the University of Minnesota." This statement implies work will be done around the critical issues that face the people of Minnesota - issues that are continuing to become more complex and multi-disciplinary. The program development process used in dissemination of information or technology transfer is not adequate when complex issues are the target of the work.

MES was "reinvented" in 1993 in order to be able to meet its mission of dealing with complex issues. The reinvention abolished long standing program areas which had difficulty dealing with interdisciplinary issues and were primarily housed in the colleges of Agriculture and Human Ecology. New relationships were formally developed with fourteen colleges or units within the University of Minnesota. Today these include: University of MN Duluth Campus, School of Public Health, the Humphrey Institute of Public Affairs, College of Education and Human Development, College of Veterinary Medicine, College of Architecture and Landscape Architecture, College of Human Ecology, College of Natural Resources, University of MN Morris Campus, University of MN Crookston, College of Agriculture, Food and Environmental Sciences, Continuing Education and Extension, School of Nursing, and Center for Urban and Regional Affairs. The breadth represented here signifies the added resources available for MES to deal with complex issues.

Ten areas of specialization were developed with membership from both campus and field faculty, most of the collegiate units, and all the counties participated. The specializations are: Livestock Systems, Horticulture, Crop Systems, Leadership and Citizenship Education, Community Resources, Financial and Business Management, Family Development, Child and

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Youth Development, and Nutrition Food and Health. These changes were necessary for MES to do its work as outlined in the mission statement. Former program development structures and support were gone and new forms were needed to help plan around issues. New structure, complex issues, new partners all led to the need to explore learning that could support doing the work under the current mission.

A More Realistic and Useful System of Evaluation and Reporting. The types of requests for reporting results to funders and other partners have also been changing over recent times. A system used by the federal partner in the USDA was called "MEMIS," a day-by-day accounting for time and contacts. The other major way of reporting was the "annual report" - giving specific details accounting for time and activities. It became apparent that both systems were no longer meeting the needs or were often shelved and never again looked at. In recent years, both systems were abandoned and no formal system was implemented in their place. Employees were relieved that long hours of documentation work which had questionable use and accuracy were eliminated. A more ad-hoc approach to reporting and evaluation began to emerge around needs, which included: the promotion process, annual performance review, grants and other funding reports, annual reports to funding partners as well as many others.

The ad-hoc approach also focused on details of accounting for time and activities. Issue based programming, in contrast to programs that centered around technology transfer, required a different supporting system. Accounting for time and activities seemed to leave out something significant that was happening in the work. The need to report on progress on complex issues led us to our work in outcomes. At the same time we were looking for help in program development, we began to learn the value of looking to the concept of outcomes in reporting and planning. Funders were also beginning to ask the question, "What happened as a result of our funding your work?" The training for faculty in outcomes was designed to ask the question, how can we learn to report our efforts in ways funders and others can get the information they need?

An Organizational Shift to Support the New Process. Without organizational support, the learning and program planning changes would not be institutionalized in the system. The question this process addressed was, "Would the participants who were selected for their informal leadership status and represented all areas of the organization, be able to implement organizational change as a result of their learning?"

Conceptualizing and Operationalizing Outcomes Work. Parallel to the concept of single loop and double loop approaches to learning, the group came to view the concept of outcomes from single and double loop perspectives. The traditional view of identifying outcomes, working toward them, evaluating progress, and basing future funding on this evaluation were seen as a single loop system. Compliance based evaluation fits the single loop model, measuring progress against the preset standards, or outcomes, without reflection on learning that has occurred in the process or inviting new environmental input into the process.

Generalization of the Learning Approach. The action learning approach relies on participants and organizational members being able to continue to facilitate learning on an ad hoc basis in their own work settings. In contrast to learning and applying new expertise, the learning process itself was a critical piece to the continuation of the work. Will participants be able to facilitate this type of learnings not only in relation to program planning, but to other content areas and processes as well?

Methodology

The process followed an action learning design in which participants together built an understanding of the problem, sought resources and solutions, critically applied new approaches, and analyzed the results. Participants consisted of a group of 35 organization members, either self-selected or nominated, who represented all functional subsets of the organizational structure. These functions included Extension Educators located in counties in the state, campus-based faculty located in some of the 14 colleges and campuses of the University, program managers, support staff, and administration.

The group met four times for a total of ten days during a nine-month period. After an initial orientation to the action learning process, members of the group designed the learning sessions, which included introduction of existing knowledge and understanding, information from outside "experts," reflection on application, and the gradual generation and refinement of new knowledge and practices. Figure 2 illustrates the theory to practice cycle.

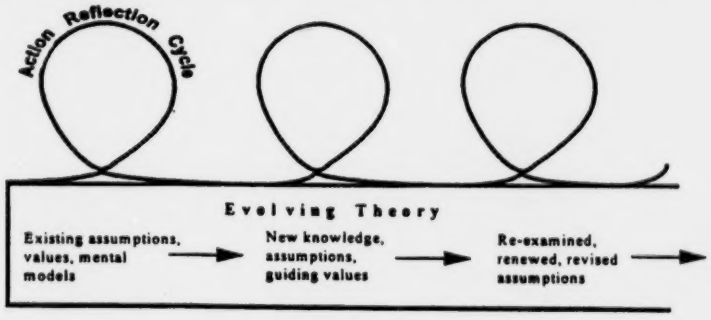

Figure 2

Two interrelated needs drove the methodology: the specific focus was to create a more effective system of program development and outcomes evaluation and reporting. A second intent was to integrate an approach to learning and working into the everyday functioning of the organization. This second intent led to the need to incorporate a triple loop in the methodology that centered around the learning process itself. Participants took on the role of consultants who would "infiltrate" the learnings throughout the organization rather than disseminate information in a more traditional stand-up training approach. They were oriented to consulting, and reflection on this role at each session provided a means to develop effective methods to transfer the learnings.

Evaluation of the results of this work took several forms. The program development processes were evaluated by audiences, stakeholders, constituents, funders, and participants. Evaluation was an ongoing process built into the learning design; content, structure, and processes were re-designed based on results along the way. The learning process itself was evaluated by participants. Many applied the process to other groups and settings and brought results back to add to the learning of the group.

Results and Conclusions

1.a. ***More Effective Means of Program Development.*** A new framework has been articulated as a way to put program development into a useful way of thinking that can result in high quality programs that help MES achieve its mission. The MES Planning Framework has eight parts:

- MES Mission Statement
- MES Vision Statement
- Principles of Program Development
- Principles for Action Plans for Outcomes (APO)
- MES Outcome Goals
- Action Plan for Outcomes Format
- Progress Report for Outcomes Format (PRO)
- Professional Plan Format.

The planning framework gives us parameters to guide our work, articulate and contextualize different processes for the work, and provides structures needed for the work to happen. The professional plan helps people form an individual identity in relation to complex work processes that focus on teams.

The process of asking the questions that are outlined in the research questions section led to a programming conference held in May, 1995. Program leadership from all parts of MES and the affiliated units came together to articulate the types of changes needed to the program development process which led to both the programming principles and principles for the action plan for outcomes. Many individuals and groups had input into the principles.

A committee was formed to take the data collected and implement a new process to replace the old Plan of Work (POW) process. This committee, which was comprised of cluster (multi-county) program leaders and outcome consultants, gathered additional information from the users. In addition to the development of the principles, the committee developed the APO and PRO format and the concept of MES Outcome Goals. The five MES outcome goals were developed in September 1995 by representatives of MES program leadership and outcome consultants with input from across the organization. The outcome goals are as follows:

- Business and groups will revitalize and connect communities through effective management or resources
- Consumers, producers, and industry will improve health, reduce risk and increase economic viability
- State residents will sustain the environment while allowing for agricultural production and land use.
- Families and individuals will develop skills to be strong and resilient
- Citizens/Leaders will build safe, viable communities.

An electronic mail system was programmed with the goals of being easy-to-use and accessible. The program was installed as of November 27, 1995. Both the APO's and PRO's are available by MES Outcome Goal on either MES Gopher or the World Wide Web by accessing MES's Home Page.

1.b. ***A More Realistic and Useful System of Evaluation and Reporting.*** The outcomes consultants have been experimenting with ways to share outcomes with relevant people. These efforts have resulted in many reporting pieces that have been valuable and well received by the targeted audience. A problem still exists however, of inadequate communication across the MES organization, resulting in incomplete, disconnected and underutilized reporting efforts. preparing reports on a specific project for different audiences.

To address these needs, the Program Report on Outcomes (PRO) was developed. The PRO is a companion form to the APO which can be entered into the e-mail system. It reports outcomes in a format similar to the APO. These two forms are independent, so reporting can be done at any time and on any effort and is not limited only to results of a formal planning process. This format allows for results to be reported as they occur, and not just at a specific ending point.

In the past, access to data from a project has been held by the person collecting the information. Sharing of the information became the collector's best guess. The PRO system allows access by anyone on the MES Gopher internal home page on the World Wide Webb. The operational use of this process is that when someone needs data on a specific project, they can ask everyone who is doing the work to send in an updated PRO. Information gathered by this system must be considered data. The individual then will prepare the specific document that is needed for that particular audience. Training will be needed on how best to assemble a valuable reporting document from the data collected in the PRO.

1.c. ***An Organizational Shift to Support the New Process.*** The changes that occurred in the reinvention process eliminated many existing structures. The new structures and the ad hoc efforts offered few concrete processes in their place. Problems around communications and difficulties with multi-disciplined expertise led to an articulated need to have more formalized structures communicated broadly in the organization. The programming framework in the APOs now provides this structure.

The concern that structures become barriers instead of support for the work caused a need for the use of concepts of critical thinking and action learning. MES is providing training and experiences in both critical thinking and action learning, so faculty will be able to formulate the

appropriate structures to do the work. This has resulted in a large number of processes that assist in the planning, that share core philosophies, and are often customized to the needs for that program.

2. *Conceptualizing and Operationalizing Outcomes Work.* Is there a more effective way of conceptualizing and operationalizing outcomes? The word outcome has created confusion and a sense of "highest importance". The outcome consultant team gave definition to four terms for MES that became the foundation for the APO and the PRO. The terms are:

- Inputs: resources used in a program. Inputs include financial resources and the expertise used in conducting a program.
- Outputs: Activities or actions taken by MES to accomplish a program, i.e., meetings, learning conferences, newsletters, etc.
- Impacts: Changes that happen to individuals as a result of program participation, i.e., knowledge gained, attitudes changed.
- Outcomes: How the larger community has changed. An outcome occurs when changes happen to a community.

Dick Krueger, an evaluation specialist with MES, provides an example that clarifies these definitions:

- Input: More money for crime
- Output: More police cars and increased patrolling of neighborhoods
- Impact: More arrests
- Outcomes: An overall reduction in crime rate and an increased perception of safety.

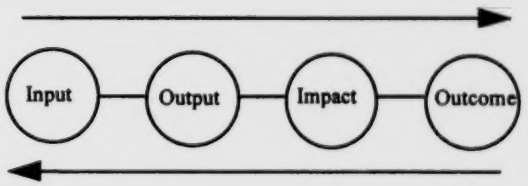

Figure 3

Figure 3 represents an order of thinking in planning programs. Left to right is typical in the technology transfer approach: you first gather the resources, plan the activities, measure the impacts, and ignore the outcomes. The new approach takes the opposite direction, right to left by first asking what community changes are being sought. It proceeds with asking how individuals in the community will change, what educational activities are needed for the changes to occur, and finally, what resources are needed to do this work.

The new outcome theory that evolved also assumed that outcomes could and would continually change. Reliance on expanding networks inside and outside of the system, reflections on learning as the programs progress, and the unknowns that result from letting go of control and empowering program participants all suggest that specific outcomes cannot be predetermined. Measuring progress becomes a learning event for everyone involved rather than a compliance exercise. Building relationships, encouraging participation and ownership, and educating and learning from collaborators becomes as important in program planning as anticipating outcomes.

3. *Generalization of the Learning Approach.* Participants are able to design and apply similar learning approaches to other organizational issues, including program planning. In the final meeting, learning about the learning took the form of generating the knowledge the group had discovered and created about learning in general. Some of the key points were:

- people outside the system should be involved early on in learning and planning processes
- experiences cannot always be passed on; people may need to go through their own experience in order to learn
- an energy is generated when people are more involved in the learning process - new learnings are discovered that cannot be anticipated
- learning was multiplied by taking the time to practice, reflect, practice again, reflect again
- this kind of learning takes time
- ownership in learning results when participants are part of the leading, planning and teaching.

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How Individual Expertise May Be Socially Constructed: A Literature Review

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Individuals must have extensive, specialized knowledge in order to perform at expert levels. Cultural factors influence whether individuals will be able and willing to acquire such knowledge. In particular, it seems useful for individuals to be surrounded by other performers who have some expertise, who are committed to furthering their own *involvement and advancement within their domains, and who are not dissuaded from helping and sharing with others because of interpersonal competition or other factors.*

Much research suggests that extensive, specialized *knowledge*—not generalized good thinking—is largely responsible for the superior performance of experts in various domains (e.g., Ericsson & Charness, 1994; Glaser & Chi, 1988). However, "knowledge" in this regard does not mean *formal* or *academic* knowledge only—or even primarily. Rather, the knowledge of an expert is a "repertoire" of themes, images, understandings, meanings, expectations, actions and techniques (Schön, 1983) that are derived from and exquisitely well-adapted to the expert's real-life task situations (Holyoak, 1991).

Part of an expert's knowledge is procedural. For an expert warehouse assembler, expert knowledge includes ways to fill an order using the fewest steps possible (Scribner, 1985). For an expert scientist, it includes ways to design experiments (Zuckerman, 1977). For an expert nurse or paramedic, it includes ways to create a sense of possibility for a very ill patient (Benner, 1984) or to intubate a bleeding one (Larson, 1991). For an expert writer, composer or other problem solver working in an ill-structured domain, expert knowledge includes ways to achieve better results by escalating task goals, reshaping one's understanding and revising one's work so that goals can be met (Scardamalia & Bereiter, 1991). (Non-experts, on the other hand, seem to "know" the opposite—i.e., that reconceptualizations and revisions are bad [Carey & Flower, 1989].)

Another part of an expert's knowledge is knowledge of what things are and how things happen. Such knowledge can enable an expert to select a procedure which produces superior results. For example, an expert nurse or physician will recognize a pattern of subtle physiological changes that may precede a heart attack in an elderly patient or respiratory distress in a premature baby (e.g., Benner, 1984). This understanding can enable the expert to choose a more appropriate medical intervention. In contrast, performers who lack this type of expert knowledge are unable to vary their actions appropriately in different situations (Hatano & Inagaki, 1993).

Case studies illustrate the role of extensive, specialized knowledge in the accomplishments of eminent performers. Woodward's encyclopedic knowledge of chemistry fueled his tremendous accomplishments in organic synthesis, for example (Woodward, 1989). Case studies of Picasso, Mozart, the Wright brothers, Watson and Crick (discoverers of the double-helix structure of DNA) and others indicate that extensive domain knowledge was an important factor behind their creative achievements—it was a much more important factor than people commonly realize (Weisberg, 1993). Case studies of striking accomplishments by less celebrated persons point to the critical role of knowledge, as well (e.g., Hunter, 1990; Sloboda, 1991).

Extensive knowledge can be beneficial because it is likely to capture many subtle but significant variations in problem settings, persons, objects and so forth, and because it is likely to capture the connections between these. Variety can help a performer to construct a more useful representation of a problem or task, and thus perform more effectively and efficiently (Spiro, Feltovich, Jacobson & Coulson, 1991a, 1991b), whereas lack of variety or lack of connectedness can do the opposite.

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Again, however, it is extensive knowledge attuned to real-life task situations—not simply academic knowledge—which tends to be most important. For example, among copier repair technicians, experts may be better distinguished by their knowledge of customers' usage patterns than by their knowledge of electronics *per se* (Orr, 1990). Evidence for the importance of task situation-specific knowledge can be found in the fact that performers in the same overall domain or industry, but in different task situations, use knowledge differently (e.g., Lesgold & Lajoie, 1991; Scribner, 1985; Smith, 1992) and create different knowledge to satisfy demands of their varying task situations. For example, tailors have created the concept of a "trousers' worth" as a unit of measure for cloth (Lave, 1985). Further evidence for the importance of situation-specific knowledge can be found in the fact that experts tend to perform much less well when they encounter tasks outside their areas of specialization or encounter atypical cases within their specialties (e.g., Patel & Groen, 1991). Finally, studies of analogical thinking suggest that while performers can make effective use of information from a variety of domains or task areas, they are less likely to do so, and less likely to do so effectively, when the information involves matters very different from the performers' target tasks (Weisberg, 1993).

An expert's knowledge may be largely tacit or implicit in addition to being extensive and complex (Bereiter & Scardamalia, 1993; Boreham, 1992; Jarvis, 1992). For this reason, it can be extremely difficult for a non-expert to appreciate the role expert knowledge plays in expert performance (Ericsson & Charness, 1994). To an observer who is unaware of an expert's special knowledge, expert performance may seem to result from supernatural reasoning, remembering or imagining processes (Hunter, 1990; Weisberg, 1993).

Lesgold and Lajoie (1991) describe an illustrative case in which an expert technician was able to repair a malfunctioning computer after lower-level technicians had failed, because the expert alone hypothesized (correctly) that data generated from a diagnostic program were inaccurate. It is tempting to view the expert as a better thinker, or at least a less inhibited one. In fact, the expert's accomplishment seems to have been the result of his greater familiarity with the social "process of designing a computer, planning how it will be maintained, creating diagnostic software, and actually doing the maintenance" (Lesgold & Lajoie, 1991, p. 308) in addition to his superior device knowledge. Similarly, the present author encountered an expert order processor who was able to calculate shipping target dates correctly where non-experts did not. Job guides had been given to all the order processors, so it might seem that the expert had superior sense-making skills or at least better reading abilities. Actually, the expert was using specific knowledge of shipping-performance standards applied to the company's manufacturing divisions as a supplement to her reading of the job guide. Differences in job roles and/or learning behaviors may help to explain how the experts in these examples acquired their special knowledge. It is worth noting, however, that these experts fit a pattern of experts generally knowing more about "systems and components at the limits of their job routine" (Lesgold & Lajoie, 1991, p. 313) and understanding better the relationships among disparate things, people and events relevant to their work.

In sum, research does not suggest that experts "do more with less." Rather, they seem to do more with *more*. What they have more of, is knowledge precisely tuned to the experts' task situations. How such knowledge is acquired is the focus of the next section of this paper.

What Performers Do, to Become Experts

The short answer to the question of how experts become experts is that they work at it very hard and very deliberately for a very long time. See, for example, Bloom (1985), Ericsson, Krampe and Tesch-Römer (1993), Gruber (1989), Hayes (1989), Howe (1990), Roe (1952) and Terman and Oden (1959). Persons who become experts start working hard earlier in their careers, compared to non-experts (Ericsson et al., 1993). They devote more hours each day to study and practice, and they study and practice more days each year (Ericsson et al., 1993). They use different methods, in comparison to non-experts, for learning in the course of preparing to perform and learning in the course of actually performing, but these methods are not short-cuts to

excellence—they *increase* rather than decrease the time and effort performers must invest (e.g., Bereiter & Scardamalia, 1993; Chi & Bassok, 1989; Scardamalia & Bereiter, 1991).

It seems clear that persons who become experts tend to be highly motivated. Motivation leads those persons to invest greatly in their own development, which results, over time, in their acquisition of the extensive specialized knowledge, physical attributes and perhaps affective elements that facilitate expert-level performance (Ericsson et al., 1993; Hayes, 1989). But what is the origin of such motivation? How do even highly motivated performers manage to find sufficient time and resources for learning when faced with potentially competing demands for work, leisure and so forth? Is motivation by itself sufficient? If not, then what else is needed? Research suggests that the answers to all these questions point to cultural factors as significant influences on expertise development. A cultural theory of expertise development need not assert that performance differences are due entirely to environmental differences, but must endeavor to explain how experts' cultures could contribute to learning and development so that acquisition of expert-level performance capacity becomes more likely. The next section of this paper attempts to do just that.

Cultural Factors Behind Expertise Development

Initial evidence of a cultural basis for individual expertise can be found in cross-cultural or comparative cognition studies that show links between performance levels among certain groups of individuals, and specific experiences provided by the individuals' participation in cultural activities (such as work) or special encouragement from other cultural participants. These studies have provided evidence of a cultural basis for early motor skills, clay conservation, adeptness in business math, figural and spatial abilities, and abilities to sort and describe various types of stimuli (Mistry & Rogoff, 1985; Okagaki & Sternberg, 1991). Interestingly, some of these studies show that performance levels can drop when a task situation is altered slightly by the replacement of culturally familiar artifacts with culturally unfamiliar ones. They also suggest that variations in task situation experience can produce significant differences in cognition. These findings echo the expertise literature.

Studies of interventions designed to improve intellectual abilities suggest that such abilities are amenable to training, but that there is a tendency for performers to regress to "normative levels of their milieux, in the face of their dominant socialization experiences" (Fowler, 1990, p. 182). These studies are further evidence of a cultural basis for expertise.

Most pertinent to this paper, perhaps, are case studies of the learning backgrounds of highly accomplished performers. Studies have been done in various domains, including language, science, art, mathematics, music and sports (e.g., Fowler, 1986, 1990; Gustin, 1985; Howe, 1990; Kalinowski, 1985; Monsaas, 1985; Sloane & Sosniak, 1985; Sloboda, 1991; Sosniak, 1985a, 1985b; Subotnik, 1992, 1993a, 1993b, 1994; Weisberg, 1993; Woodward, 1989; Zuckerman, 1977). What these studies reveal above all is that highly accomplished performers tend to have come from environments *saturated* with resources, opportunities and incentives for the development of expertise in the domains favored by members of the performers' cultures. The studies suggest that cultures help to sustain individuals' motivation to engage in the protracted, effortful learning activities that produce expertise. Cultural arrangements provide subsistence and time for individuals to learn, and provide the additional elements such as tools, information and examples that individuals must have if they are to become experts. At least, this is true of some cultures.

To some extent, in the cultures from which highly accomplished performers come, learning resources, opportunities and incentives are provided by persons in teaching roles for the conscious purpose of developing expertise in learners. This is especially true for young learners. But increasingly, as the learners move into adulthood, learning resources, opportunities and incentives are generated by fellow members of the learners' cultures *incidentally*, as byproducts of those members' own efforts to learn and practice at expert levels. Some of these resources and so forth are generated in formal learning contexts. Many more appear to be generated in informal learning contexts. This phenomenon is in accord with research which shows that informal and incidental learning, and learning through participation in communities of practice, are important

modes of learning among adults (Lave & Wenger, 1991; Watkins & Marsick, 1992). But the case studies of highly accomplished performers highlight one additional significant point: The persons who facilitate expertise development among performers who become experts are not *just* practitioners, typically. Rather, they are practitioners who have already acquired a degree of expertise themselves *and* who are ambitious to become still better.

How Performers Help Each Other to Become Experts

The case studies of highly accomplished performers, together with studies of learners' interactions in workplaces (e.g., Albrecht & Hall, 1991; Hutchins, 1993; Keller & Keller, 1993; Larson, 1991; Lave & Wenger, 1991; Orr, 1990) and schools (e.g., Cuellar, 1992), illustrate the ways that performers and their cultural co-participants help each other to acquire and perfect expertise. These studies indicate that successful learners acknowledge each others' special interests and abilities, collaborate in learning ventures and experiments, critique each others' efforts, observe and copy each others' successes, share tips, trade "war stories," discuss innovations, display accomplishments, develop and disseminate job guides and tools, accompany each other at cultural events where new ideas can be assimilated, share language, pose questions, identify problems and proffer explanations for each other, among other things. Such learners pursue and attain high levels of achievement.

Less successful learners do some of these things too, but less frequently, less enthusiastically and with less knowlege and skill. Moreover, less successful learners do other things that actively diminish each others' learning prospects (e.g., Cuellar, 1992; Freeman, 1993; Suskind, 1994). For example, they pressure learners to invest their time in non-learning endeavors. They model the non-pursuit and non-attainment of expertise in their own activities, and they disclaim learners' interests, abilities and achievements. When they attend formal learning sessions, they are disruptive. In some instances, they ridicule or threaten learners who try to improve their knowledge and skills. (One classmate described a learner's efforts to improve as a form of "disrespect" for his less ambitious peers, [Suskind, 1994].) In other instances they undermine learning efforts in more subtle ways, such as ignoring questions or objections from performers who notice problems in task situations (Hatano & Inagaki, 1993).

Co-participants of successful learners accomplish a number of things through the types of behaviors described above. They model values and behaviors that favor learning and achievement, which can sustain learners' motivation and show them useful ways to learn. They reward learning and achievement informally with attention and admiration, which can further sustain motivation. In some cases, they also help to create or maintain formal reward systems. Through their successes, they help to create attractive, exciting venues for accomplishment. By integrating learning with work and recreation—for example, by trading "war stories" during lunch breaks—they create more time for learning and they reduce the odds that learning will be undermined by competing needs for subsistence or diversion. They help to insure that expertise development will not be too profitless, too dull or too lonely an enterprise to be sustained.

Many researchers have noted, however, that motivation and learning effort are not by themselves sufficient to insure expertise development. Learners must have *high-quality* examples to build upon. They must have *accurate*, credible feedback. And they must encounter the artifacts of their domains with sufficient *frequency* and *variety* to support construction of the kinds of knowledge that facilitate performance at expert levels—the kinds of knowledge described at the start of this paper (e.g., Ericsson & Charness, 1994; Hatano & Inagaki, 1993). For these reasons, it can be quite advantageous for learners to have co-participants who are highly skilled as well as highly ambitious.

Expert performers are more likely than non-experts to be able to generate high quality information, ideas and examples. Their opinions and examples are more valued by learners, in many cases. Knowledgeable, interested performers are likely to generate greater quantities of discussion oriented toward learning, achievement and innovation. Not all such discussion may be equally valuable, but the odds of producing valuable insights seem to be increased when such

discussion increases (Albrecht & Hall, 1991). Environments populated by experts may provide exposure to greater varieties of domain artifacts. Non-experts' repertoires are more constrained, and this seems at least partially attributable to experiential deprivation due to cultural factors (Freeman, 1993). Expert environments may produce a kind of overlearning, which is useful because the knowledge a performer will require for future tasks cannot always be precisely predicted (Orr, 1990).

Expert environments may provide redundant learning opportunities. For example, a learner will not only be formally trained to perform a procedure, but will see it done and hear it discussed in authentic practice settings by other, expert performers. Even the tools and technologies of the task environment, which expert performers may have helped to create, can reinforce the appropriate procedure (Hutchins, 1993). Such redundancy may be useful where a principle or procedure is not easily apprehended through a single mode or instance of learning.

Expertise tends to be highly specific to task situations, as the first section of this paper explained. Information and examples from persons who are *not* currently expert task performers may have low utility, therefore. For this reason too, it can be very advantageous for learners to be surrounded by expert performers who share insights in the course of their practice.

Why Performers Help—Or Hinder—Each Other

Why do performers facilitate expertise development in each other? In fact, they do *not* in all cases. As described above, less successful performers create cultures of "negativism and animosity that...[are] constantly strengthened" by the performers' own behaviors (Cuellar, 1992, p. 23). But successful performers have also been shown to undermine co-participants' learning in some cases, through hazing, exclusion of co-participants from work and learning activities, and other means (e.g., Lave & Wenger, 1991; Watkins & Marsick, 1993).

Co-participants of the successful learners in the case studies described above were committed, often deeply committed, to the subject matters of their respective domains. They found them beautiful, fascinating, morally and practically significant. They were also strongly committed to their own development and advancement within those domains, in most cases. Their commitment and ambition led them to engage in behaviors that incidentally, it seems, generated resources, opportunities and incentives for other learners' advancement. For example, the co-participants asked questions of learners because *they* wanted to learn—not because they wanted to enlighten the learners through Socratic dialogue. Co-participants included learners in activities such as work and conversation because it was useful or enjoyable for the co-participants. They shared anecdotes and products of their work in order to publicize their own accomplishments and thus gain respect from other performers. Co-participants worked hard and generated good examples for learners to build upon in order to satisfy the co-participants' own high practice standards—not because they wanted to model achievement behaviors for the learners. In contrast, co-participants of the less successful learners were much less committed to their own development and advancement, and were thus less likely to engage in behaviors that supported learning by other performers.

In cases where successful co-participants are reluctant to support learning by other performers, concerns about competition are often implicated. For example, co-participants fear job loss, loss of status and so forth if other performers should become equally skilled and knowledgeable (e.g., Jacobs & Jones, 1995; Watkins & Marsick, 1994, p. 254). On the other hand, co-participants who facilitated learning by other performers in the studies described above *also* mentioned competition as a factor behind their behaviors (e.g., Larson, 1991, p. 146; Sloane & Sosniak, 1985; Sosniak, 1985b). What could explain this? Further research is needed, but many of the persons in the studies who did *not* aid learning among other performers appear to have been concerned primarily with *inter*personal competition (e.g., Monsaas, 1985). Interpersonal competition concerns might reduce interpersonal trust and cooperation. Lack of interpersonal trust can inhibit sharing of ideas and learning within relationships, research has suggested (e.g., Albrecht & Hall, 1991; Kram, 1985; Larson, 1991). Co-participants who did aid learning among other per-

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formers appear to have been more focused on *intra*personal or *"goal* competition" (Griffin-Pierson, 1990), in which the successes of other performers served as referents but did not automatically translate into perceived losses for the co-participants. The case studies further suggest that environmental variables may have influenced the performers' varied competition orientations. For example, performers who had joint responsibilities for maintaining a piece of equipment had little reason to undermine each other's learning; they shared information and advice freely (Orr, 1990).

Conclusion and Recommendations

Fowler (1990, p. 179) has noted: "Perhaps most widely overlooked in the nature-nurture equation is how few life histories reflect even a moderate range of opportunities to acquire the skills, motivation and interest needed for excellence in any field." This paper has indicated that extensive, specialized knowledge is required for excellence in most fields and that cultural factors influence whether performers will be able and willing to acquire such knowledge. In particular, it seems useful for learners to be surrounded by co-participants who have expertise, who are committed to learning and who are not dissuaded from helping and sharing with other performers because of concerns related to interpersonal competition or other factors. It would be useful to have additional research on the effects of organizational factors on the expertise development and expertise sharing behaviors of performers. For example, what are the effects of formal training, employee involvement, downsizing, task designs, incentive structures and other variables? More generally, what are the differences between workplaces where performers share expertise and engage each other in learning endeavors, and workplaces where performers do not?

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Experts and Expertise: The status of the research literature on superior performance

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Employee expertise has emerged as one of the key concepts of the HRD profession. Yet the research base of expertise is incomplete. In this paper, the author summarizes and critically reviews the status of the concept: its definitions, methodological approaches, theories of expertise, substantive research findings, and developmental issues. In the conclusion, the author proposes an agenda for future research and theory development.

The development of employee expertise has been described as a key strategic imperative for organizations operating within a rapidly changing, hyper-competitive economic environment (Torraco & Swanson, 1995). Changes in technology, production processes, and management approaches in virtually all organizations have led to a renewed and continuing interest in expertise. Contrary to predictions that the introduction of advanced machinery and production technologies as well as the growth in service-sector jobs would lead to deskilling, or at a minimum to a polarization of skill requirements into a comparatively small group of highly skilled employees and a majority of employees with little more than manual or basic skills and knowledge (Reich, 1991), recent research indicates that the restructuring of the American economy has not led to a deskilling of work. A recent survey of U.S. private business establishments by the National Center on the Educational Quality of the Workforce and administered by the Bureau of the Census (The National Center on the Educational Quality of the Workforce, 1995), for instance, found that over one-half of American employers (56%) noted an increase in skill requirements in their organizations over past three years, only five percent reported a reduction, and 39% reported no change. In response, the vast majority of employers provide or pay for formal training (81% overall; 99% of organizations with 100 or more employees). Estimates of the annual expenditure for training provided by private U.S. employers alone range from $40 billion (for formal training) to $200 billion (for formal and informal training, including lost wages) (Eurich, 1985, 1990), thereby easily surpassing the amount of Federal spending on public post-secondary (2-year, 4-year, and graduate) education. One-half of this expense is passed along to consumers in form higher costs for products and services, the other half presents tax-write offs (Eurich, 1990.)

Expertise is of importance to individuals, organizations, and society at large (Bereiter & Scardamalia, 1993), and its development is at the core of the field of Human Resource Development (HRD), which, according to one university faculty group, is defined as "a process of developing and/or unleashing human expertise through organization development and personnel training and development for the purpose of improving performance" (HRD Faculty of the University of Minnesota, 1994)

The purpose of this paper is to investigate the concept of expertise by reviewing relevant research and to define the status of our understanding of the concept. As a novice in this area, and given the vast amount of literature related to expertise in various academic disciplines, this review will be cursory and serve to delimit the territory, rather than explore it in-depth. This paper will be restricted to expertise as an individual level construct, and will not address other levels of analysis, such as group, organization, or society, or expertise that can be built into processes or systems. This paper will further largely ignore situational or contextual variables that may elicit, further, or inhibit expertise. The source of this review is primarily the literature of cognitive psychology and the cognitive sciences, where the bulk of research has been conducted over the past several decades and where "research on expertise may be one of the most rapidly expanding areas (Ericcson & Smith, 1991, p. 1). The emphasis in the cognitive sciences is to model expertise and to understand its processes.

Definitions of Expertise

The term expertise is used in many different situations, carries a number of different connotations, is multi-dimensional, and, in general, has evaded clear definition (Salthouse, 1991). Expertise, like

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the term performance, often functions as a value judgment, as an expression of a social or consensual evaluation; someone who has expertise is typically seen as highly skilled and/or highly knowledgeable in some specific area, is presumably dedicated to keeping up-to-date through practice and/or continued learning, and has a high level of commitment to the area or domain of expertise. 'Self-styled experts' are distrusted, but we put faith in expert opinions and expert witnesses. Terms related to expertise are mastery, skill, competence, specialization, knowledge, savvy, and authority. Expertise is used in relation to behaviors, cognitive states, and attitudes. Kochevar (1994) for instance proclaims: "The power of an expert's performance is rooted in the superiority of his/her operative knowledge or 'expertise'. Expertise is the task specific knowledge used to perform typical tasks in a given domain" (p. 8). Johnson (1987) states that "expertise can most simply be defined as highly adaptive behavior. People who have expertise have a 'power' that allows them to achieve results; to get the right answers. Expert behavior is also fluent and efficient" (p. 12). Lastly, Salthouse (1991) reflects on the popular opinion that "an expert is anyone who has the self-confidence to consider himself or herself an expert" (p. 286).

Three observations become apparent from this cursory sampling of statements about expertise: First, expertise is defined in terms of what experts do, and for the most part the study of expertise has been the study of experts. This presents an important a priori constraint on our understanding of the phenomenon: it limits the extent to which we can comprehend developmental processes (how does one become an expert, develop expertise?), and presents the danger of confounding social labeling with the concept of interest (is X called an expert because she has expertise, or because of some social norm that assigns this label to some specific behavior or status irrespective of the degree of expertise, or both?). Campbell, McCloy, Oppler, and Sager (1993) point to a similarly confusing situation in regards to defining performance: " the word performance is misused and exploited to the extreme in society at large, and is frequently butchered beyond recognition in psychology" (p. 35). A similar situation has been observed in the study of leadership, where research has been conducted primarily an persons already in leadership positions. We will see in the following discussion about methodologies of studying expertise, how expertise research has tried to avoid this confound by restricting the range of expertise domains under study. Defining a construct in terms of its outcomes is a fallacy that makes predictive research using expertise as the independent variable impossible.

Second, expertise is expressed as behavior, in general, and performance, in particular. Mere behavioral potential, for instance a vast amount of knowledge, insight, or wisdom *without* proof that such cognitive prowess has stood the test of application is not sufficient. Being learned is a necessary, but not sufficient condition for expertise, but neither is behavior that is due to chance or plain luck, such as winning a large amount of money in a lottery. We do expect some consistent public display of expertise over time, or at least be able to trace successively more advanced accomplishments that may culminate in a singularly impressive work. On the other hand, expertise must be distinguished from its effects or results: expert performance may or may not be effective or efficient within a given, say organizational context. If we look at expertise as an individual level construct, then outcome variables such as productivity, or organizational level variables, such as competitive position may or may not result as the result of expertise. This issue is complex, however: popular usage of the term assigns to experts the ability to navigate within an organizational setting, that is to be system-savvy and to know how to apply their domain specific knowledge (introducing the concept of fit between expert and context). For research purposes (and evaluation purposes as well) however, the concept of expertise and its results should be kept apart. This caveat, too, parallels Campbell's *et al.* (1993) strong statement about performance and its possible outcomes:

> as an indicator of performance, effectiveness is by definition contaminated....if the research questions deal with predictor validities...focused on the individual, then the dependent variable should not be something that the individual cannot influence...[it] would be maximally informative to know the relationship of performance to effectiveness and not to confound them. (p. 41)

Third, if expertise has to do with behavior, then it makes sense to display the degree of expertise in a given area, say music, on a continuum from novice to expert behavior. A possible distribution may look like a normal curve (Salthouse 1991), whereby novice behaviors are represented at the low end of the curve and experts' at the extreme right. In fact, a common scheme for categorizing a given expertise domain is an ordinal scale with six categories: lay person, beginner, novice, intermediate, subexpert, and expert (Patel & Groten, 1991) This implies that in

any given area or domain, there will be a rather small number of experts, while the vast majority will perform at a lesser level.

In the following pages, expertise will be used synonymous with outstanding performance. This usage is consistent with writers such as Swanson (1995), Johnson (1987), and Harmon and King (1985), who heuristically define expertise as "skill and knowledge possessed by some humans that result in performance far above the norm" (Harmon & King, 1985, p. 259). The usage of high levels of performance for expertise, however, begs the question of what does the expertise research adds over and above what can be studied about performance. Concept redundancy has been a problem for organization behavior research in general (Schwab, 1980) and is to be avoided since scientific theories are aiming at parsimonious explanations.

Methodological approaches to studying expertise

Expertise research has progressed along two distinct lines of inquiry: the cognitive sciences have focused almost exclusively on the processes associated with the acquisition and representation of knowledge, and have largely ignored motivational components. Organizational behavior research, on the other hand, has addressed motivational components, such as the relationship of job satisfaction or task design on performance. The difficulty of capturing situational determinants of performance [the 'E' in Lewin's conceptual definition of behavior as: $B=f(PxE)$] has led to a preference for experimental designs with standardized situations and objective performance measures that preclude social indicators to confound the relationship of performance and evaluation. As a result, the range of tasks and performance domains in expertise research has been relatively narrow.

A second characteristic of expertise research has been the choice to account for expertise in terms of acquired rather than inherited characteristics. Early attempts of explaining and predicting outstanding performance centered on primarily inherited general characteristics (such as intelligence and personality traits) and inherited special abilities (for example: musical ability, artistic ability, body build). Galton (1869, cited in Ericsson & Smith, 1991), for example, attempted to account for the accomplishments of eminent individuals in a wide range of fields by studying their familial and genetic origins, and concluded that these individuals gained prominent standing in society because of a long history of achievement that was the result of a blend of intellectual (natural) ability and personal motivation. Such eminence, he concluded, was genetically determined and limited to a small number of families stemming from common ancestors. More recent lines of inquiry have concentrated on high performing individuals, and were based on "the belief that exceptionally high levels of performance would reflect some basic exceptional ability involving attention, memory, general speed of reaction, or command of logic [or] other stable individual characteristics such as features of personality, motivation, and perceptual style" (Ericsson & Smith, 1991, p. 5). This line of research has, however, proven inconclusive, as has the search of specific inherited characteristics as sufficient explanation for high performance. Whether in the area of musical pitch, athletics, or chess, "it becomes difficult to rule out the possibility that such characteristics [accounting for superior performance] have not been acquired as a result of many years of extensive training and practice...and most of the empirical evidence favors an account in terms of acquired skill" (Ericsson & Smith, 1991, pp. 6 - 7). While inherited characteristics or stable traits may favor or act as a prerequisite for the acquisition of certain skills, and act as boundary conditions for the level of proficiency attainable by an individual, these are seen as insufficient to explain and predict high performance; most of the research, consequently, has focused on acquired characteristics and the process of acquisition.

While some work in this area has used biographical sources and analyses of events and circumstances in the lives of outstanding scientists and artists (for example: McCurdy, 1983; Mindess, 1988), the original expertise approach (Ericsson & Smith, 1991) used standardized conditions to describe, analyze, and identify the components of the critical performance. To this end, research progresses along three distinct steps: (1) a collection of representative tasks is identified or developed that capture the relevant aspects of superior performance in a specific domain and elicit superior performance under laboratory condition; (2) a systematic empirical analysis of the processes leading to the superior performance is conducted and mediating processes identified; and (3) the types of learning or adaptation by which the mediating processes are acquired are analyzed and studied in real life and under laboratory conditions.

Finding or designing tasks that capture the superior performance of experts in a given domain under controlled, that is laboratory settings imposes a clear limitation on the range of tasks or domains that can be investigated, but yields important advantages: first, the performance of the designed tasks will reflect the stable characteristics of superior real-life performance; second, the performance of such tasks under controlled conditions can yield sufficient information for assessing and analyzing mediating processes; and third, this methodological approach allows for the study of acquisition processes through practice. On the other hand, only for a select number of expertise domains is the collection of representative tasks easy or possible (for example memory experts or 'mental calculators'); in most other cases the design of standardized tasks to capture real life expert performance is difficult (Ericsson & Smith, 1991). This is especially true for ill-defined and ill-structured problems, which Newell and Simon (1972),defined as problems where (1) incomplete information about the initial situation is given; where (2) goals are vague or unspecified, and no specific situation exists that can be used as a target for problem solving activity; and (3) where incomplete or no information about the means for solving the problem is given, and the problem solver must generate substantial amounts of the material needed to obtain a solution for himself or herself. For complex task domains and ill-structured situations, such as physics and medical diagnosis, investigators "tend to select a small number of tasks without specifying the population from which those tasks were chosen to be a representative sample (Ericsson & Smith, 1991, p. 15).

In the second step, the analysis of expert performance, mediating processes have been inferred through direct observation of, for instance, a subject's eye movements during visually represented material, think-aloud verbalizations as subjects perform a small number of specific tasks, or retro-active reports of the reasoning applied to solve a specific problem. Think-aloud verbalizations of expert-novice comparisons is the best-known and most widely used method of assessing differences in the mediating processes as functions of the subjects' levels of expertise Examples of this method include comparisons of chess grand masters and novices, experienced physician and medical students, and expert and novice troubleshooting technicians.

Another commonly used method consists of extensive case studies of single subjects, where data on a large number of different tasks is collected on individual subjects. Examples here include case studies on individuals with the ability to perform calendar calculations, and memory experts.

Theories of Expertise

The first generation program of expertise research (Holyoak, 1991) from the mid-fifties through the early 1970's concentrated primarily on the study of "knowledge-lean" (Glaser, 1985, p. 1) tasks in which competence can usually be acquired over a short period of learning and experience. These studies explored the basic information processing capabilities that people employ in situations where they lack any specialized knowledge or skill. The historical development of this early research originated in the work of Norbert Wiener on cybernetics after World War II which encompassed information theory, the theory of feedback systems, and the electronic computer In 1954, Newell began work on programming a digital computer to learn to play chess, an effort within the greater context of an attempt to simulate an environment for an Air Defense radar center at the Systems Research Laboratory at RAND (Newell & Simon, 1972). Initial results were reported in a groundbreaking article by Newell and Simon (1958) and later summarized by Simon and Newell (1971), where the authors first described the requirements of a theory of problem solving, and stated their opposition to "mentalism and magic", that is "attempts to explain thinking by vague references to vague entities and processes hidden beyond the reach of observation within the skull" (Simon & Newell, 1971, p. 147). The replication of human thought processes through computer programs would yield "an iron-clad insurance against admitting magical entities into the head" (Simon & Newell, 1971, p. 148). The theory of problem solving was stated in terms of the human information-processing system, where a problem solver is confronted by an objectively defined task within a given task environment and problem space. Problem solving consists of a series of selective searches for information in the problem space and results in series of knowledge states that are progressively more inclusive and finally encompass the solution to the problem. The information processing system consists of three structures which are important in the study of human problem solving behavior: the sensory register, short-term memory, and long-term memory (Newell & Simon, 1972).

The sensory register accepts information from the sensory organs (eyes, nose, etc.) and holds the information for a very short time. Memory of sensory input decays in less than a second, and information must be processed for storage in short-term memory. Short-term memory is the working memory for the information processing system, it is conscious, and limited in its ability to store information. Information in short-term memory will decay within about 15 seconds, unless transferred into long-term memory, which is believed to have an unlimited capacity for storing information (Anderson, 1995).

The problem space, which must be constructed or retrieved from long-term memory, consists of the initial condition (in which the given or starting conditions are represented); the goal condition (in which the final goal is represented); intermediate problem conditions (consisting of new conditions that are generated by applying an operator to a condition); and operators (the moves that result in a change from one condition to the next) (Mayer, 1983).

First generation expertise theories described a number of heuristic processes that were thought of as generically applicable to problem solving in many, if not all domains. These included 'hill climbing' (moving toward the target), progressive deepening (return to a base position after a particular move has been explored), scan-and-search strategy (moving to a new 'node' and scanning its immediate environment), means-end analysis, generate-and-test, and subgoal decomposition (Glaser, 1985).

Second Generation Theories on Expertise The promise of finding a small number of general rules-of-thumb that underlie problem solving behavior and expertise, however, did not prove itself out for more complex, knowledge-rich tasks. Studies of the reasoning processes of chess grand masters, physicists, physicians, computer programmers, and experts in a number of other domains demonstrated that general heuristic search methods are weak and characteristic of novices rather than expert performers. Glaser and Chi (1988) summarized the key characteristics of experts' performances that second generation research has uncovered:

1) Experts excel mainly in their own domain. Contrary to the hypothesis of expertise as a global thinking ability, or a number of general rules or processes that transfer from one domain to another, there is widespread agreement that expertise is domain-specific. Expertise requires a sufficiently large amount of domain-specific knowledge. When confronted with non-domain problems, experts' problem-solving behavior is much like that of novices.

2) Experts perceive large meaningful patterns in their domain. The knowledge base of experts is organized in chunks that are larger, that is: contain more detail information, than those of novices. When experts perceive a given situation in their domain, they are able to organize the information presented in larger patterns; conversely, they are able to recall more information. The process of pattern recognition occurs so rapidly that it may take on the character of intuitions. This finding has been replicated over a number of domains ranging from chess, the game of GO, reading circuit diagrams and architectural plans, interpreting x-ray plates, and computer programming. Outside of their domain, however, experts' perceptual skills resemble that of novices.

3) Experts are fast: they are faster then novices at performing the skills of their domain, and they quickly solve problems with little error. This ability comes as a result of the larger amount of practice, which makes the skill automatic and frees up memory capacity for processing other aspects of the task. In problem solving situations, experts are faster because they are able to recognize larger patterns and move toward solution without extensive searching.

4) Experts have superior short-term and long-term memory. Experts' ability to recall recently presented information seems to exceed the limits of short-term memory, because of their ability to chunk larger amounts of detail information. They also excel in long-term memory recall. Chess masters, for instance, are often able to recognize plays from a number of well-known games. Again, this ability is domain specific. Outside their domain, experts and novices are similar in their memory

5) Experts see and represent a problem in their domain at a deeper (more principled) level than novices who represent problems at a superficial level. Expert physicists, for instance, use principles of mechanics to organize categories, whereas novices built their problem categories around literal objects stated in the problem description. Both experts and novices use conceptual categories, but experts' categories are based on domain-specific principles and rules, while the novices' categories are surface-feature oriented.

6) Experts spend a great deal of time analyzing problems qualitatively. Chase and Simon (cited in Posner, 1988) have argued that masters level chess players have spent between 10,000 and

20,000 hours, or ten years, analyzing chess positions. When comparing thinking aloud protocols of experts and novices, researchers were able to show that experts typically try to understand the problem by building a mental representation from which they can infer relations that define the situation. Experts begin by defining the situation and seeking information about the initial situation, and spend more time on initial problem representation. The expert approach decreases the amount of thinking required to produce a good solution; by moving the problem to a higher, abstract level, situational and other constraints are either included in the solution or become irrelevant. Novices, on the other hand, work directly from a specific problem statement and seek to provide problem solutions much faster. This leaves the solution of specific constraints to be done after a potentially unwieldy set of possible solutions has been generated.

7) Experts have strong self-monitoring skills. Experts seem to be more aware than novices of when they make errors, why they fail to comprehend, and when they need to check their solution. The greater self-monitoring skills and self-knowledge of experts are due to their greater domain knowledge and the different representation of that knowledge, which allows them to predict problem difficulty on the basis on underlying principles rather than less relevant surface features.

Holyaok (1991) described a series of inconsistencies of second-generation theories, and proposed a third generation of theories build on connectionist principles where expertise is represented not in large schemata, but in networks of small units of knowledge that can be processed or accessed rapidly and in parallel by experts.

Development of expertise

An early theory was proposed by Fitts (1964) who proposed a developmental model of skill acquisition consisting of three stages: (a) cognitive, (b) associative, and (c) autonomous. In the first stage, the learner/novice tries to determine what must be done and how it is done. This stage involves an initial encoding of the skill sufficient to permit at least some crude approximation of the behavior required, and the individual will remain at this level until the task can be done correctly. The learner will often verbally rehearse the information associated with the skill. The second stage involves a smoothing out of the skill performance. Any errors in the initial understanding or performance of the skill are gradually detected and eliminated. Verbal mediation also decreases as the learner becomes more proficient at the skill. Polanyi (1962, in Johnson, 1987) compared this stage of the skill acquisition process to the master/apprentice situation, where, through verbal and non-verbal interaction, the expert is able to focus the attention of the novice on certain aspects of the task. This assistance results in a shift where the novice, who formerly concentrated on the specific subcomponents of the task, begins to look at the task from a gestalt perspective. This switch in awareness leads to the third stage of the model, where behavior becomes automated as a result of extensive practice in the second stage. Because the task is now being completed almost automatically, the short term memory is freed up and may be used for other tasks. At this stage, the individual performs somewhat automatically, and may no longer be able to report what knowledge is being used to complete the task. Improvements of the task performance at the third level may continue indefinitely.

Anderson (1982) built on Fitts' theory in formulating a general framework for the acquisition of cognitive skills, the ACT system. The systems proposed two major stages, the declarative stage, in which facts about the skill domain are interpreted, and the procedural stage, where "the domain knowledge is directly embodied in procedures for performing the skill" (Anderson, 1982, p. 369). These two stages are similar to Fitt's cognition and automated behavior stages. Fitts' second stage is seen by Anderson as a transition stage where "practice of knowledge is converted into a procedural form in which it is directly applied without the intercession of other interpretive procedures" (Anderson, 1982, p. 370). Declarative knowledge is gradually transformed into procedural knowledge through the process of knowledge compilation, which is posited to consist of two subprocesses: composition, where several subtasks which follow each other in solving a particular problem are collapsed or chunked into a single task (resulting in speed-up of the task), and proceduralization, whereby automated versions of the task are built that no longer require domain-specific declarative information to be retrieved into working memory .

Research Agenda

1) Construct Validation of Expertise A glaring issue is the imprecise and ambiguous status of the concept. Construct validation research needs to be undertaken that a) bounds the construct and delineates its relationship to related constructs within a nomological network. Only when we understand how expertise differs from skill, knowledge, ability, competence, learning, effort, performance, training, education, etc. will we be able to ascertain whether, in fact, the construct is useful for scientific theory. Such an endeavor will also need to define expertise in terms of processes associated with it, rather than its outcomes.

2) Domains of expertise If, as cognitive research claims, expertise is domain-specific, there is a need to conceptually and empirically define domains. Taxonomies need to be developed that specify whether expertise relates to skills (expertise in welding) or contexts (welding at a shipyard). This question is of particular importance for ill-defined tasks, such as management. Questions of transfer of expertise from one domain to another are also of importance in this area.

3) Contextual factors Much of the experimental expertise research has deliberately isolated expertise from contextual issues. There is, substantial evidence, that learning and competence are is situation-bound. Rogoff (1984), for instance, argued strongly for a naturalistic approach in studying expertise, because laboratory studies artificially exclude contextual variables and influences that may well be an integral part of an individual's behavior. She asserts that

> thinking is intricately interwoven with the context of the problem to be solved. The context includes the problem's physical and conceptual structure as well as the purpose of the activity and the social milieu in which is imbedded. One must attend to the content and the context of the intellectual activity in order to understand thought processes....Context is an integral aspect of cognitive events, not a nuisance variable. (Rogoff, 1984, pp. 2 - 3)

4) The Expertise of groups The majority of expertise research has focused on individuals working by themselves on individual tasks. This is, however, not the mode of work for the large majority of employees. In order to be useful for the organization, individual expertise must be shared, integrated with the expertise of others, and integrated into the larger organizational context. This integration and coordination should, optimally, lead to group or team-level expertise, organization-level expertise, industry-expertise, and lastly, societal and global expertise, an area addressed by the literature on organizational learning.

5) The development of expertise Scant attention has been paid to the development of expertise within the organizational context. Becoming an expert takes time and involves a complex interplay of external and internal processes. Given the slow rate of maturation in highly complex knowledge areas, it stands to reason that there may be limits to the degree by which this process can be sped up. Training and development certainly play a role, but so does the application of learning in a trial and error mode. Learners invariably make mistakes and the degree to which organizations can provide such room for experimentation may well decide the rate of development of expertise. As a somewhat counterintuitive consequence, organizations who want to nurture experts, should be prepared to provide room for people to fail, rather than expecting 100% success at all times. A related consequence is that the practice of job rotation and frequent reassignment of personnel may inhibit the development of expertise, provided that there is too little domain overlap between the assignments for meaningful building of expertise in a given domain.

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Job Performance Goals: Bridging the Gap from Theory to Practice

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Job performance goals can be central components of a variety of performance management activities. Performance goals serve as the basis of performance appraisals, job design, employee training, and other efforts to improve performance. However, performance goals have failed to serve a central role in these interventions. The lack of an integrated theoretical framework for developing performance goals is shown to be an underlying cause of their disappointing record. A theoretical framework is presented to address the need for more effective performance goals. Empirical research is needed to assess the theoretical contribution of the framework presented. A strategy for conducting this research is suggested.

Job performance goals provide guidance to individuals in two important areas. They specify *what* is to be accomplished on-the-job and indicate *how well* it is to be accomplished. Few concepts are as central to performance improvement efforts and as broadly applicable to the workforce as the development of meaningful performance goals to guide work activities. Drucker (1974) was an early advocate of linking the performance goals of the organization to the goals that guide the work of individuals. The organizational goals that result from answering Drucker's questions, "What is our business and what should it be?," are the basis for specifying individual performance goals. "The goals of each managers job must be defined by the contribution he [sic] has to make to the success of the larger unit of which he is a part . . . . He must know and understand the ultimate business goals, what is expected of him and why, what he will be measured against and how" (p. 438). Rummler (1980) expanded upon Gilbert's (1978) pioneering work in human performance by specifying the systemic links among individual task accomplishment, job outputs, and organizational goals. He demonstrated that job performance goals must be based on the linkage between individual accomplishments and organizational goals. Robert Mager (1984) also discussed performance goals in terms of the "desired outcomes" to be achieved, and acknowledged that even abstract goals involving attitudes or creativity can be systematically described by identifying the performances and outcome states that best capture the meaning of the goal.

The Central Role of Performance Goals

Performance goals that accurately specify what and how well job outcomes are to be accomplished can serve a number of important performance management roles in organizations. Job performance goals should be prominent features of performance appraisals, job design, employee training and development, and other initiatives that affect the content and structure of work activities. In each of these areas job performance goals should provide individuals with meaningful guidance to assure that work efforts are both personally fulfilling and well aligned with the broader needs of the organization. Because they specify the key outputs of jobs, job performance goals provide the core framework around which jobs are designed. Jobs that are flexibly designed around outputs can be reconfigured as organizational needs and customer requirements change (McLagan, 1990). Job analysis traces the work flow needed to produce work outputs and is an important tool for work redesign. At a time when the content and methods of work are continually changing, performance goals provide necessary direction for efforts to redesign jobs.

Accurate and meaningful performance goals should also be a central feature of performance appraisals. The key outputs and quality standards of one's work must be established if performance appraisals are to provide an equitable basis for compensation, promotion, and other personnel decisions (Mohrman, Resnick-West and Lawler, 1990). Employee training to improve work performance must also be based on an analysis of performance requirements and the training and

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non-training factors that contribute to meeting these requirements (Rossett, 1992; Swanson, 1994). Each of these interventions promotes the development and management of employee performance. To fulfill these roles, each intervention must be based on accurate and meaningful job performance goals.

However, performance goals have not lived up to the high expectations we have set for them. In many cases meaningful job performance goals either do not exist or employees consider the goals they have to be largely irrelevant to their jobs. There are a number of reasons why performance goals have not lived up to expectations. This article will examine the reasons for the gap between the actual and potential role of job performance goals. It will suggest ways in which this gap can be bridged by systematically examining how performance goals are developed in organizations. To help close the gap between theory and practice, a theoretical framework for the development of performance goals will be presented. This theoretical framework will become the conceptual point of departure for field research to study the factors that shape the development of effective performance goals.

The Poor Record of Job Performance Goals

Job performance goals have failed to serve a central role in performance improvement efforts. Although performance goals should be the basis of performance management activities such as performance appraisals, job design, and training and development, they have not provided the kind of core guidance for improving performance expected of them. For example, much has been written about the shortcomings of performance appraisals to effectively manage performance. Although virtually every organization uses some type of performance appraisal, most organizations do a poor job of appraising employees and few are satisfied with the processes or outcomes of performance appraisal (Locher and Teel, 1988; McLean, Damme and Swanson, 1990; Mohrman, Resnick-West and Lawler, 1990). Poorly-specified performance goals have been implicated as an major contributor to ineffective performance appraisals. Several studies have shown that performance goals simply do not provide a clear basis for assessing employee performance. For example, while supporting the need for goal setting in the appraisal process, Dorfman, Stephan and Loveland (1986) found that performance goals frequently do not accurately reflect job responsibilities. Harkness and Mulinski (1988), in their study of performance standards for social workers, also demonstrated that performance goals do not accurately reflect job tasks and responsibilities. In addition, irrelevant or unrealistic performance goals are often cited as contributing to employees' distrust of the performance appraisal process and of the supervisors who frequently set performance goals (Bannister, 1986).

Numerous studies have been conducted in an effort to improve performance appraisal practices, including those that have examined the need for more relevant performance goals (Gunn, 1993; Harkness and Mulinski, 1988). Yet, evidence suggests that efforts have not been made to apply research findings in ways that improve practice. Maroney and Buckely (1992) argue that, while many aspects of the performance appraisal process have been researched, including the perceived accuracy of the performance standards used in the appraisal process, these research findings have not been integrated into practice.

Similarly, the use of performance goals in job descriptions have proven equally ineffective as guides to performance. While many employees have job descriptions, few ever refer to them for performance guidance (Davidson, 1986). The guidance provided in job descriptions is usually too general to be helpful and is not based on performance objectives that are specific, measurable, achievable, results-oriented, and timely (Bricker, 1992). Job descriptions that do not describe performance goals in ways that are meaningful to employees are of little value in shaping performance.

Similarly, employee training programs are rarely based on a systematic analysis of organizational performance requirements. The analysis supporting performance-oriented training must link performance needs at the organization, process, and individual levels (Rummler and Brache, 1995), and must include an analysis of the work processes within which performance is to be improved (Swanson, 1994). However, rarely is rigorous work analysis conducted as the basis of training. As a result, training often addresses employee capabilities that contribute only marginally to organizational needs (Campbell, 1990). Job performance goals are an important by-product of work analysis. However, if no attempt is made to analyze work processes, the

performance goals will remain obscure and training may be ineffective. Fortunately, recent contributions to the field of HRD hold some promise of a trend toward more performance-based training (Jacobs and Jones, 1995; Swanson, 1994; Robinson and Robinson, 1995).

Additional reasons why performance goals have not been a central force in performance management activities follow from the assertion that, in many settings, performance goals are simply not easy to specify. In a rapidly changing business environment where products, services, and production methods are undergoing constant transformation, performance goals are less stable and, therefore, more difficult to identify. This is particularly true in high technology environments where organizational structures are fluid, products and markets are undergoing constant change, and work methods require high levels of worker interdependence. Mohrman, Mohrman and Worley (1990) found that traditional goal-setting methods, such as management by objectives (MBO), are unrealistic in these settings and that using them leads to high levels of employee dissatisfaction.

Fragmented Research on Goal Setting. Another barrier to the effective use of performance goals is that the research on performance goals has been fragmented along disciplinary lines. Researchers in the fields of management and psychology have studied goal-setting most extensively, yet their work has diverged into two, non-overlapping bodies of knowledge about the same phenomenon. Research on goal-setting in psychology has typically been done with individual subjects using quantitative, experimental designs in laboratory settings. These studies usually do not exceed one hour in length, the goals are determined by the experimenter in advance, commitment to the goals is routinely obtained, and the goals apply to simple, straightforward tasks. While these conditions are conducive to experimental research designs, they admittedly fail to capture the organizational context in which real performance goals are adopted.

On the other hand, goal-setting research in the field of management has been conducted almost exclusively in the field where the unit of analysis is usually the organization, rather than the individual. Because controlled conditions are difficult or impossible to achieve in this context, correlational and case study research methods have been used. Unlike laboratory studies, organizational research must accommodate multiple goals that are often in conflict because they have been proposed by different interest groups. Goal complexity is taken for granted and commitment to goals cannot be assumed. In short, psychology lab studies and management field studies share little in common, even though they both seek greater understanding of the role of performance goals in the workplace. Psychological research has examined performance goals isolated from the context in which they are adopted. Management research has examined the environmental and strategic determinants of goals without driving the implications of these goals deep enough into the organization to influence individual performance.

It is unfortunate that there has not been more cross-disciplinary exchange in goal-setting research. These two research approaches artificially disconnect the systemic continuity of performance goals into individual and organizational domains. This lack of convergence in goal-setting research has fragmented the study of goal-setting as a performance improvement strategy and it has prevented the advancement of performance goals to a central position in performance improvement efforts.

What should be clear from the preceding discussion is that, while much attention has been given to the study of goal-setting, a holistic theory for the development of effective performance goals is lacking. There is no unified conceptual basis for how to develop job performance goals that meet *both* individual and organizational needs. A comprehensive theoretical framework is needed. In the next section, key goal-setting constructs will be reviewed and integrated into a theoretical framework for developing performance goals. Then, a research strategy adapted from Yin's (1994) approach to case study research will be suggested as the method of choice for empirically testing this theoretical framework.

A Theoretical Framework for the Development of Performance Goals

Performance goals that meet organizational needs but not individual needs may enjoy temporary support from some employees, but will ultimately be abandoned by those who seek fulfillment from their work. On the other hand, performance goals that meet individual needs but not organizational needs are not likely to be adopted by the organization in the first place. Thus, a major premise underlying the proposed theoretical framework is that performance goals must be developed to meet both organizational and individual needs.

In the next section, a key feature of the proposed theoretical framework, known as *organizational alignment,* is described. Then, in the following section, the goal-setting concepts that address the *individual needs* component of the framework will be examined. Together, *individual needs* and *organizational alignment* constitute the major conceptual components of the framework.

Organizational Alignment of Performance Goals. For goal-setting to serve as a performance improvement strategy, performance goals must be aligned at multiple levels of the organization. Several models have specified levels of the organization at which performance efforts must be coordinated if the overall performance of the organization is to be optimized. Three such models are briefly reviewed next.

Odiorne's (1985) system for developing performance objectives for managers begins with specifying goals at the strategic level. Strategic goals are then converted into operational terms to guide departmental activities. Operational goals then become the requirements against which individual goals are set. In this way, job goals are linked directly to broader organizational requirements.

Noel Tichy, an early advocate of the strategic role of human resource management, offered another tiered model of organizational performance (Tichy, Fombrun and Devanna, 1982). He was the first to demonstrate that human resource functions such as employee selection, training and development, and reward systems could be accomplished at three levels: strategic, managerial, and operational. Tichy suggested that human resource professionals focus more attention on the strategic management of human resources, even if this is at the expense of operational concerns. Tichy's three levels of human resource management have been used to audit the strategic alignment of HRD (Torraco, 1992).

Rummler and Brache (1995) have also developed a three tiered model of organizational performance. Their "three levels of performance" model clearly maps out how performance goals should be linked at the individual, process, and organization levels. According to Rummler and Brache, the outcomes of individual performance must contribute to functional or process goals, which, in turn, should be linked to organizational goals.

Each of these models identifies levels of the organization at which performance goals should be aligned. In their own way, each of these models explicitly acknowledges the systemic nature of organizations. Because organizations behave as complex systems, the performance of individuals and groups must be managed at several levels simultaneously. Jobs must be designed such that job outputs contribute to a systemic value chain that ultimately meet customer needs.

Individual Needs and Performance Goals. Job performance goals should provide individuals with meaningful guidance to assure that work efforts are both personally fulfilling and well aligned with the broader needs of the organization. Several important goal-setting constructs have been well-supported by research and can be used as prescriptions for how goals should be developed to meet individual needs. Four such goal-setting constructs are described next.

First, one of the most robust findings in goal-setting research is that higher levels of task performance result from setting goals that are specific and challenging. Studies have consistently confirmed that setting clear, specific goals focuses attention and effort and leads to higher performance than not providing such goals, or than simply admonishing people to "do their best" ((Locke, Shaw, Saari, and Latham, 1981). Setting challenging goals leads to greater effort and persistence than is expended for easy goals. As long as goals are seen as feasible, higher levels of performance can be expected as employees strive to reach more challenging goals (Locke and Latham, 1990).

Second, employee commitment to goals is increased if employees are involved in determining how goal attainment will be measured. Commitment to goals is increased as employees perceive that the measures used to assess goal attainment are fair and represent means over which they have control (Locke and Latham, 1990). In addition, participation in goal-setting should be encouraged to the extent higher goals are often set through employee involvement than would be set by managers alone (Kondrasuk, 1981; Latham, Mitchell and Dossett, 1978).

Third, performance goals should be used for their own developmental value (Latham and Yukl, 1975). Social learning theory maintains that we hold mental representations of future outcomes and that our expectations of successfully achieving these outcomes can motivate learning and new behavior (Bandura, 1977). Just as learning objectives are used in the classroom and in other settings to guide learning, performance goals can be used to develop new skills in the workplace. Those responsible for setting goals should be trained in the developmental potential of goal-

setting. Setting goals and providing feedback on goal achievement represent two of the most well-supported constructs in behavioral science research.

Fourth, performance goals should be developed to accommodate employee preferences for how an outcome is accomplished, as well as for what the goal itself should be. We should be able to accommodate employee needs for skill variety, task identity, task significance, autonomy, and feedback as a way to enhance employee satisfaction and performance (Hackman and Oldham, 1980). Because these characteristics describe how work is done, they can be applied to the performance goal side or to the task design side of the performance continuum. Thus, a theoretical framework for developing performance goals should be responsive to employee needs for goals that reflect these characteristics.

In summary, the performance goals that are responsive to individual needs should be specific and challenging goals, they should be developed through participatory processes, they should be used for developmental as well as performance management purposes, and goals should represent work that is designed to meet individual needs.

An Integrated Model. Together, the two major conceptual components of *organizational alignment* and *individual needs* constitute the theoretical framework for goal-setting (see Figure 1. Theoretical Framework for the Development of Performance Goals). A major proposition derived from this theoretical framework is that performance goals that reflect *organizational alignment* and that respond to *individual needs* will command a central position in an organization's efforts to improve performance.

This framework for goal-setting will serve as the theoretical point of departure for empirical research to validate a theory that effectively guides the development of performance goals in organizations. A research strategy adapted from Yin's (1994) approach to case study research is suggested as the method of choice for empirically testing this framework.

Figure 1. Theoretical Framework for the Development of Performance Goals

A Research Strategy

A theoretical model should provide a system of key concepts and their interrelationships that clearly explain a phenomenon of interest. The theory should explain the operational dynamics of the phenomenon (i.e., how it works), it should give the boundaries of the domain over which the theory is expected to apply, and it should show how the phenomenon interacts with its environment (Whetten, 1989). The theoretical framework presented here for developing performance goals emphasizes the need for performance goals that are aligned at various levels of

the organization and that meet individual needs. While this theoretical framework may have some intuitive appeal, it will offer little additional value to organizational scholars and practitioners unless its ability to explain goal-setting phenomena can be tested and validated through empirical research. Newly developed theories can be tested by specifying propositions that are logically derived from the theory, and then testing these propositions through research in the real world (Dubin, 1978). A key challenge to researchers is adopting a research strategy that is appropriate for testing such a theory.

Quantitative, experimental methods have been successfully used to examine the influence on goal-setting of individual expectancies, knowledge of results, commitment, goal difficulty, and other variables (Locke, Shaw, Saari, and Latham, 1981). However, a multitude of contextual factors influence how performance goals are adopted in organizations that are not accounted for in psychological research. Strategy and market issues external to the organization affect the adoption of performance goals, as do technological and interpersonal factors internal to the organization. Experimental and quasi-experimental research cannot be designed for the degree of control and standardization needed to demonstrate causal relationships between goal-setting variables and organizational outcomes. Organizations devise strategies and set goals in uncertain, unpredictable environments. It is difficult enough to construct reliable and valid measures of these variables, let alone demonstrate causal relationships among them (Richards, 1986; Snow and Hambrick, 1980).

The Case Study Research Method. The investigation of complex goal-setting phenomena that operate at multiple levels (i.e., organization, process, and individual) requires a research strategy that is more sensitive to context than traditional quantitative approaches. In these instances, idiographic and case study methods of research are well suited for the kind of in-depth study required to examine complex organizational phenomena (Luthans and Davis, 1982; Mintzberg, 1979). These methods are particularly useful for empirical research on the development of performance goals where the boundaries between phenomenon (how performance goals are developed) and context are not clearly evident.

A research strategy that is compatible with this type of inquiry is Yin's case study research methodology (Yin, 1994). Yin's approach requires the collection of extensive data in order to produce an in-depth understanding of the entity under study and is well suited for the development and testing of theory. According to Yin, the case study is the preferred research strategy "when *how* or *why* questions are being posed, when the investigator has little control over events, and when the boundaries between phenomenon and context are not clearly evident" (p. 13).

The primary goal of the proposed research is the validation of a theoretical framework that explains how performance goals are developed in organizations. Consequently, "statistical generalization" for making inferences about a population on the basis of empirical data collected from a sample of organizations is not relevant here. Rather, this research involves generalizing from case study to theory. Yin calls this "analytic generalization," in which a previously developed theory is used as a template with which to compare the empirical results of the case study. If two or more cases are shown to support the same theory, replication may be claimed. The empirical results are considered even more potent if two or more cases support the same theory but do not support an equally plausible, rival theory (Yin, 1994).

Multiple-Case, Embedded Units of Analysis Design. Empirical testing of theory through case studies requires that propositions be logically derived from the theory, which are then used to guide the researcher to the data to be collected to answer the central research question(s). The central research question here is, "How are job performance goals developed to meet both individual and organizational needs?" For this research, a multiple case study design would be used in which data on the development of performance goals would be collected from two or more organizations. Although the main unit of analysis would be the organization, another level of analysis "embedded" in the organization would also be used to study the development of performance goals. This "embedded unit of analysis" would be at the employee-supervisor level where job performance goals are often developed. Thus, the case study research would follow a "multiple-case design with embedded levels of analysis" (Yin, 1994).

Research questions are then posed to examine the validity of each proposition. Separate questions posed at the organization and process levels would examine the degree of alignment of performance goals throughout the organization. Questions would also be posed at the employee-supervisor level of analysis to test propositions from the theory about how performance goals are developed to meet individual needs. Throughout the research, an attempt is made to establish a "chain of evidence" to insure that the research evidence ultimately addresses the original study

questions. Explicit links should exist between the propositions, the data collected, and the conclusions drawn. In addition, emphasis is given to using multiple sources of evidence, that is, evidence from two or more sources, but converging on the same set of facts or findings.

Yin's case study methodology provides a focused approach to answering the main research question and it allows for sensitivity to context. In short, Yin's approach to case study research is the method of choice for conducting research on how performance goals might be more effectively developed in organizations.

Summary. Accurate, meaningful job performance goals can be central components of a variety of performance management activities despite their disappointing record to date. Several reasons have been identified for the discrepancy between the potential and actual roles of performance goals. Underlying their disappointing performance is the lack of an integrated theoretical framework that adequately explains the need for performance goals to meet both individual and organizational needs. This paper has presented a theoretical framework that integrates the *organizational alignment* and *individual needs* components of performance goals. This preliminary framework serves as the theoretical point of departure for empirical research to refine and validate the theory. A strategy for conducting this research has been suggested that follows Yin's case study methodology.

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Differential Rates of Employer Sponsored Job Training by Demographic Characteristics Among Executives, Administrators, and Managers

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This study uses data gathered from the January, 1991 Current Population Survey to examine the incidence and relative opportunity of employer sponsored job training by gender and race. Responses to job training sponsorship questions reveal that females and non-whites are less likely to receive employer sponsored training than are their male and white counterparts.

Job training goes hand-in-hand with productivity, quality, flexibility, and automation in the best performing firms with changes in productivity frequently attributed to investments in education and training (Bartel, 1993; Lynch, 1994; Veum, 1994). Job training can be examined by looking at its two main categories—qualifying training and skill improvement training. Qualifying training is the training workers need to acquire jobs. Skill improvement training is training needed for workers to retain their jobs or advance to higher positions. Although qualifying training and training taken to improve skills play different roles in the workplace, research suggests that both contribute to greater earnings (Eck, 1993). Given the importance of job training for the purposes of developing people for the work force, acquisition of this training becomes an important issue.

Research into the acquisition of training is limited because there is a lack of comprehensive data available (Veum, 1993). However, various avenues exist for workers to obtain job training. These avenues include acquisition through government programs such as JTPA, acquisition through the military, acquisition through union sponsored apprenticeships, acquisition through the worker's own sources such as an investment in a post-secondary school, and acquisition through their employer.

Evidence suggests that employer sponsored training not only reduces the probability and duration of worker unemployment, but also boosts employee productivity, reduces new-hire turnover, and ultimately offers benefits on both the employee level and the organizational level (Bartel, 1993; Knoke, 1995). The National Center on the Education Quality of the Work Force (1995) survey findings indicate that virtually *all* surveyed organizations say that they supply either formal or informal training for their workers. Eighty-one percent of these organizations claim that they provide or pay for various forms of training for their employees, with 57 % reporting that their formal training efforts have increased over the last three years. *Training's* 1994 Industry Report estimates that over $50 billion was spent by U.S. organizations last year on formal in-house training programs alone with around 47 million people receiving this training (Lee, 1994). Fifty-two percent of these recipients were in management and professional positions and 48 % were in other occupational classifications. Clearly, employers are making substantial contributions to job training. However, research suggests that white males are the most frequent recipients of employor sponsored training in the United States (Lee, 1994; Veum, 1993). Changes in the demographic makeup of the American work force has given cause to conduct a closer examination of this issue.

The appearance of the American work force has and will continue to change dramatically. *Workforce 2000* projects that by the year 2000, minorities, women, and immigrants will compose 85 % of the growth in the work force with the once dominant white male group representing approximately only 45% of the total work force (Thomas, 1991). Furthermore, four key trends that are reshaping the American work force include: (a) the work-force will grow slowly; (b) become older; (c) consist of more females; and (d) consist of more disadvantaged individuals (Johnston, 1987). Because of these trends, policy makers must begin to reconcile the conflicting needs of women, work and families, integrate Black and Hispanic workers into the economy, and improve the educational preparation and job training

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of all workers. These projections indicate drastic differences in the composition and needs of the work force we once knew and understood.

Clearly, job training and education play an important role in developing the skills, knowledge, positive attitudes, and motivation workers need to function effectively. The level of an employee's earnings, productivity, success, and advancement hinge on these key factors. For example, employers often choose to make training investments in those employees they believe will bring the organization the highest returns. With evidence showing that training has a positive effect on earnings and productivity, a disproportionate distribution of this type of training is disturbing. Is there an equitable distribution of employer sponsored training opportunities?

In this context, distributional equity will become an increasing concern. Distributional equity refers to the justice or fairness in the manner in which an economy's output is distributed among individuals. Distributional equity is sometimes expressed in terms of the distribution of income, of wealth, social welfare, or utility and is often associated with value judgments. In terms of a labor market definition, labor market discrimination is said to occur when personal characteristics of the worker that are unrelated to productivity become criteria for the valuation in the labor market (Ehrenberg & Smith, 1991). However, race and gender are currently the most prominent of all personal characteristics alleged to be *unrelated* to productivity. This study examines race and gender issues as they relate to the equitable distribution of job training opportunities. In other words, are these opportunities distributed in an equitable fashion?

Specifically, this study examines whether gender and race are related to the incidence of employer sponsored job training opportunities among adult respondents in the January, 1991 Current Population Survey by occupation. The research reported in this paper is a portion of a larger study in progress and focuses on one occupational grouping: executives, administrators, and managerial occupations. The larger study includes registered nurses, secretaries and clerical staff, and accountants and auditors.

Methods

Data are analyzed from the *Current Population Survey* (CPS), January, 1991 (ICPSR 9716). The CPS is the source of the official government statistics on employment and unemployment. The universe consists of the civilian non-institutionalized population of the United States living in households. The probability sample selected to represent the universe consists of approximately 57,000 households containing approximately 114,500 persons 15 years old and over.

The January 1991 collection provides data on labor force activity for the week prior to the survey and a supplement that includes data on skills and training that workers needed to obtain their current or last job, on-the-job training, skills used on the last job, and workers' perceptions about the adequacy of their skills. Comprehensive data are available on the employment status, occupation, and industry, and personal characteristics of persons aged 15 years and over. Also shown are personal characteristics such as age, gender, race, marital status, veteran status, household relationship, educational background, and Hispanic origin. Questions were asked of all persons 15 years of age or older living in households, who were members of the experienced labor force, whether they were employed or not. *The Job Training Supplement* portion of the interview was asked of all persons 15 years of age and older who were members of the experienced labor force. These respondents were either working or working and temporarily absent from their jobs.

A subset of the CPS probability sample was created on the basis of age, work force status, labor force status, detailed occupation classification, and participation in job training. Age classification is based on the age of the person at his/her last birthday. Full-time workers, or persons on full-time schedules, include persons working 35 hours or more, persons who worked 1-34 hours for non-economic reasons (e.g., illness) and usually work full-time, and persons with a job but not at work. Persons with employed status comprise (1) all civilians who, during the survey week, do any work at all as paid employees or in their own business or profession, or on their own farm, or who work 15 hours or more as unpaid workers on a farm or in a business operated by a member of the family (*Working*); and (2) all

those who have jobs but who are not working because of illness, bad weather, vacation, or labor management dispute, or because they are taking time off for personal reasons, whether or not they are seeking other jobs (*With Job, Not at Work).*

According to the U.S Department of Labor (1992), information on how workers develop the skills they need for their jobs is useful in career guidance and in planning education and training programs. The CPS Job Training Supplement asked individuals to identify the various types of training they required to obtain their current jobs as well as those used to improve their skills. Specifically, the supplement centered on two questions: "Did you need to specific skills or training to obtain your current or last job?" (*Qualifying Training*) and "Since you obtained your present (last) job, did you take any training to improve your skills?" (*Skills Improvement Training*). Persons who responded "yes" were asked to identify the source(s) of their training, the type of source or program, who paid for the training, how long it lasted, and whether respondents completed the program. Respondents who answered "yes" to each of the questions, "Did you need specific skills or training to obtain your current or last job?" and "Since you obtained your present (last) job, did you take any training to improve your skills?" were asked the sponsorship question, "Did your employer pay for *All, Half or More, Less Than Half* , or *None* of the training?"

Employer Sponsored Job Training. The BLS (1992) reports that employers are increasingly sponsoring qualifying training and have greatly enhanced formal company programs for skills improvement. More use of on-the-job training is predicted to increase into the next century (Dervarics, 1993). Over $5 billion per year is spent by employers on employees' tuition reimbursement (Matthes, 1993). Various forms of these tuition reimbursements exist (Allen, 1991; Barry, 1990; Houlden, 1992; Reid, 1992; Rinalla, & Kopecky, 1989). For example, some firms reimburse their employees tuition and book dollars per semester for skills improvement in an academic setting while others offer qualifying training tuition reimbursements and tuition incentives to attract new employees (Merrill, 1987; Reid, 1992; Roach, 1990).

Employer sponsored apprenticeship and internship programs are being successfully created and implemented in organizations across the country (Filipczak, 1994; Gunsch, 1993; Rogers, 1994; Rowley & Crist, 1995). These programs are designed to build job skills, create productive employees, attract younger employees, and decrease the turnover rate.

Executives, Administrators, and Managers. Executives, administrators and managers, at all levels of an organization, are frequently subjected to various forms of developmental training and educational experiences. For continued success and career maintenance, members of this occupational classification are typically required to participate in some form of qualifying training or skills improvement training (Thomas, 1988; Jomaoas, 1985). The most successful and largest US corporations spend in excess of $450 billion on training and development programs investing most of these funds in their executives, administrators and managers (Thomas, 1988). Most companies view training and continuing education as vital to the professionalism and career development of managers so as to prepare them for upward mobility and high performance (Margotta, 1994). For many, these experiences do lead to advancement, promotions, and salary increases.

In an examination of the relationship of race to managers' ratings of promotion potential, Landeau (1995) concludes that females are rated lower than males and Blacks and Asians are rated lower than whites. Ohlott (1994) contends that one reason so few women have been promoted to senior management positions, in this white male dominated occupation is that during their careers, they experience fewer developmental job opportunities. Is the same true for people of color? Since developmental job opportunities include job training experiences, this contention requires further examination.

The research reported in this study includes only those persons who were considered *Working,* and *With Job, Not at Work,* between the ages of 15 and 65 years old, employed in the private sector within the occupational classification of *Executives, Administrators, and Managers,* participated in some form of *Qualifying Training* and/or *Skill Improvement Training* programs, and responded, *All, Half or More, and Less than Half,* to the sponsorship question.

Variables

Incidence Rates and Relative Opportunity Rates. Three levels of incidence rates of employer sponsored job training events were calculated by the demographic characteristics of gender and race for persons whose qualifying training and skills improvement training were paid for by their employers. These sponsorship levels include (1) *All*; (2) *Half or More*; and (3) *Less than Half.* The relative opportunity ratio of receiving employer sponsored job training for each set of rates are presented.

Gender and Race. To capture the relationship between the demographic characteristics of gender and race and employer sponsored training events, two dummy variables were created. The gender variable, *MALE*, indicates whether a CPS respondent is male rather than female. *WHITE*, the race variable, distinguishes whether a respondent is White rather than Black, Hispanic, Asian, or other.

Analyses

Responses to the three sponsorship levels of the *Qualifying Training* and*Skill Training* questions were cross-tabulated by gender and race. Relative opportunity rates for males versus females were calculated by dividing the incidence rates for males by the incidence rates for females. Relative opportunity rates for whites versus non-whites were calculated by dividing the incidence rates for whites by the incidence rates for non-whites.

Findings

Table 1 shows the incidence and relative opportunity for Executives, Administrators, and Managers to receive employer sponsored job training for both *Qualifying Training* and *Skill Improvement Training* by gender and race. Incidence rates are reported per 1000 people.

Qualifying Training. For those who received employer sponsored qualifying training by gender, males and females received all of their training at the same rate. Nevertheless, males were one and one-half times more likely than females to receive half or more of their training sponsored by their employer but slightly less likely to have less than half of their training sponsored.

By race, whites were nearly one and one-half times more likely than non-whites to have all of their training sponsored but slightly less likely than non-whites to have half or more of their job training sponsored. However, non-whites were more likely to receive less than half of their qualifying training sponsored by their employer.

Skill Improvement Training. By gender, for those who received employer sponsored skill improvement training, males were more likely to receive all of their training and less than half of their training sponsored than did females. Yet, females were slightly more likely than males to have half or more of their job training sponsored.

By race, whites were nearly one and one-half times more likely to have all of their training employer sponsored than non-whites and three times more likely than non-whites to have half or more of their job training sponsored. They were, however, slightly less likely than non-whites to receive less than half of their training sponsored by their employer.

Discussion

The results of these data support the contention that whites and males are the most frequent recipients of employer sponsored job training opportunities in the United States, at least in one occupational classification: Executives, Administrators, and Managers. With the existing key trends that are reshaping the America work force, clearly in these occupations, employer sponsored job training opportunities for females and non-whites appear to be distributed inequitably.

Table 1
Incidence and Relative Opportunity of Employer All Sponsored , Half or More Sponsored, and Less Than Half Sponsored Qualifying Training and Skill Improvement Training for Executives, Administrators, and Managers by Gender and Race (n=13,081,654)

Employer Sponsorship and Demographics	Qualifying Training		Skills Improvement Training	
	Incidence Per 1000 People	Relative Opportunity	Incidence Per 1000 People	Relative Opportunity
		Gender		
All Sponsored	46	1.00	59	1.28
Male	46		64	
Female	46		50	
Half or More Sponsored	18	1.50	14	0.92
Male	21		13	
Female	14		14	
Less than Half Sponsored	19	0.90	9	1.25
Male	18		10	
Female	20		8	
		Race		
All Sponsored	46	1.42	59	1.36
White	47		60	
Not White	33		44	
Half or More Sponsored	18	0.58	14	3.00
White	19		15	
Not White	13		5	
Less than Half Sponsored	19	0.62	9	0.69
White	18		9	
Not White	29		13	

Source: Current Population Survey, January 1991: Job Training
Note: *n* for all *Males* = 7,743,645; *n* for all *Females* = 5,338,008; *n* for all *Whites* = 12, 018,088; *n* for all *Non-Whites* = 1,063,565

This study's outcome implies that females and non-whites receive less employer sponsored job training opportunities at lower rates than males and whites. If job training leads to increased productivity, career development, career advancement, and higher salaries (Bartel, 1993; Knoke, 1995; Landeau, 1995; Margotta, 1994; Ohlotte, 1994), these data

suggest that females and non-whites are shortchanged. Specifically, one assumption is that females and non-whites are not afforded the same opportunity to become as productive, nor do they receive the same opportunity to achieve career advancement, as do males and whites as executives, administrators, and managers.

Given these data for this occupational classification, how equitable is the distribution of employer sponsored job training opportunities in other occupational groups? In the larger portion of this study where employer sponsored job training opportunities are examined for Nurses, Secretaries and Clerical Staff, and Accountants and Auditors, it will be interesting to see if the outcome of this study is restricted to the occupational classification of Executives, Administrators, and Managers, or if females and non-whites receive similar treatment.

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An Analysis of Reasons for Nonparticipation in Adult Education Programs from the Perspectives of Low-literate Blue-Collar Male Workers in an Urban Workplace

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This study analyzed reasons for non-participation in adult education programs from the perspectives of thirteen low-literate blue collar male workers. Findings suggest that although low-literate, blue-collar male workers lack confidence in their "book learning" abilities, they are able to maintain their self- concepts by developing a high level of confidence in their work abilities. The resulting high "work esteem" and low "academic-esteem" variables, conjointly persist as important determinants of nonparticipatory behavior in organized adult education programs.

In the last few years, there has been increased interest by employers, educators, and policy makers, in the literacy levels of the adult population and the rate of participation in adult education programs in the United States. In particular, employers are concerned that their workforce will be under-skilled and ill-prepared for the technological advances of the future. These rapid economic, technological, and labor market changes have created an urgency for employers, requiring greater attention to skill deficiencies of those entering the workforce as well as those already employed.

The purpose of this research was to examine reasons why blue-collar male workers with low-literacy skills fail to participate in adult education programs in light of a heightened awareness of technological advances and increased job losses in the low-skills areas. Because existing literature and theories have focused primarily on correlating specific variables with participation, important information about eligible adult learners, and particularly "blue collar" workers, has been ignored. This study investigated the influences of lifeworld experiences on nonparticipation in adult education programs of 13 blue-collar male workers with low-literacy skills. Historical, cultural, social, and structural dimensions of their lives were explored for the purpose of finding reasons these men do not participate in adult education programs.

Review of the Literature

Much of the participation/nonparticipation research in the past has focused on the problems within the individual adult and has labeled him/her as being in need of treatment, rehabilitation, and remediation (Brookfield, 1986; Beder, 1991). Some studies (Cross, 1981; Darkenwald, 1980; Hayes, 1988; Johnstone & Rivera, 1965; Valentine, 1990) focus primarily on identifying barriers and deterrents inhibiting participation, while others focus on participation from the perspectives of potential learners (Fingeret, 1990); Ross-Gordon, 1991; Stalker-Costin, 1987) to find the meaning education has for the individual based on past schooling experiences. Still others view education participation from a social reproduction position (Bowles & Gintis, 1976; Giroux, 1983; MacLeod, 1987; Weis, 1988), examining the structures in society that have served to negatively impact the opportunities of some and improve the advantages of others. Quigley (1987) uses resistance theory to explain education nonparticipation, and most recently, Cookson (1995) has employed a multi-disciplinary model to examine nonparticipation in adult education programs.

However, findings of this study suggest that none of these theories and models adequately capture the reasons some adults, particularly blue-collar male workers with low-literacy skills, choose not to participate in adult education programs. Because most of these

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researchers have examined nonparticipation by studying those already participating, nonparticipants are lableled as deficient, and in need of rehabilitation (Beder, 1991; Brookfield, 1986). Findings of the current research suggest the contrary. Although nonparticipants may lack basic skills, according to mainstream standards, they are proficient in hands-on and manual work skills, priding themselves in their abilities to excel in this area.

None of the research studies examine the lifeworld histories of nonparticipants in an effort to understand the context in which meanings attached to education are developed and participation behavior is shaped. However, this research is unique in that respect, providing a holistic view of individual workers' perceptions of education and what it means in the lives of individuals. Thus, clearer understandings of nonparticipation in education must be seen as grounded within the context of the lifeworld experiences of populations of interest, including psychosocial, sociocultural, and sociostructural influencers.

Conceptual and Theoretical Framework

This research was analyzed from a dual perspective using phenomenology and symbolic interaction theories. This framework allowed the researcher to study individuals from their viewpoints, while considering the psychosocial, sociocultural and sociostructural elements that interplay to influence and shape their behaviors. Taken together, these variables provided a holistic picture of the life, educational, and work experiences of these 13 individuals and helped to bring about a fuller understanding of their perceptions of education within the context of their respective lives.

The theoretical framework used to interpret the data is multi-realmed and comprehensive. It is gestalt in its orientation, using psychological and sociological perspectives. From psychology, a phenomenological perspective allows for the examination of the influencing factors that impact the lifeworld of the individual while not denying the socio-structural influences. From sociology, symbolic interaction theory is used to understand the meanings life experiences have for the person in relation to his interpretation of situations or events. Symbolic interactionists focus on "how individuals make sense of their worlds and themselves" (Hess et al, 1982, p. 16), and behold symbols, the things to which we attach meaning, as the foundation of social life (Henslin, 1995). Based on this theory, each of us acts according to how we define situations, thus, our behavior depends on our subjective interpretation, or definition of reality (Henslin, 1995). Thus, reality is socially constructed, meaning that reality is defined from the perspective of the respondent within the context of the situation.

Both perspectives regard the dynamic interplay between the individual and his environment as important, while at the same time, "it is necessary to see the world through the eyes of the actor to reach a full understanding of the purpose of that person's acts" (Krathwahl, 1993, p. 323). Within this dual framework, the complexities of the individual adult and the dynamic relationships of the influencing factors can be better understood. Through the voices of the study participants, we can see how their individual experiences interface with powerful social and organizational forces that invade the environments in which they live and work (Seidman, 1991). This allows us to more fully understand the impact of the multiplicity of influencers and the study participants' subsequent behavior toward adult education participation. This further affirms the importance of studying individuals within their entire lifeworld context before behavior can be understood. From a sociological standpoint, socio-structural forces can be critically analyzed, while using psychological perspectives to understand the reasons for the individual's behavior. However, this framework calls for a multi-analytic process, where the perspectives are used in concert with one another and not as separate means of analysis. This framework encompasses the dynamism of complex entities that help shape the world and perspectives of the individuals under investigation and their behavior toward participation.

Methodology

Given the purpose of attempting to understand the meanings blue-collar urban male workers with low-literacy skills attach to education, in an effort to find reasons they are not participating in

adult education programs, this study was conducted using qualitative principles. Psycho-social, socio-cultural, and socio-structural factors emerged as variables that influence the attitudes and behaviors of the thirteen male study participants regarding adult education participation. Taken together, these variables provided a holistic picture of the life, educational, and work experiences of these individuals and helped to bring about a fuller understanding of their perceptions of education within the contexts of their respective lives.

Data collected through open-ended in-depth interviewing were organized into three areas based on a phenomenological interviewing technique: life history context, detail of experiences, and reflection on meanings. Major categories that emerged from the data included: educational and schooling experiences as youth, family and cultural influences, perceptions of education and work, and education in relation to work. Through subcategories of "missing something," teacher insensitivity, tracking and labeling, early responsibilities, race and class discrimination, "simple" aspirations and "hidden" opportunities, implicit details about the experiences of these men were illuminated. The inference of meanings based on the actions and behaviors revealed in the narratives of these thirteen individuals were analyzed. A dual theoretical framework, grounded in phenomenology and symbolic interaction, was used to interpret the data.

Life History Context Influences on Nonparticipation

In an attempt to wrest meaning from the individual and collective lives of 13 male blue-collar workers with low-literacy skills, it was necessary to examine their experiences with education rooted within the context of their everyday lives as youth. They grew up in different parts of the United States, during different time periods, and under different, yet similar circumstances. They share in common their socioeconomic class and their workplace affiliation. Although their experiences were different, in many ways, they were similarly grounded in the low educational attainment of their parents, socioeconomic class, their difficulties experienced in school, responsibilities expected of them at an early age, and their perceptions of education relative to work. Furthermore, these commonalties in their early home lives led these men to their present careers and to similar perceptions of education participation. By considering these experiences within the context of the past, a linkage is established for understanding the significance of their influences on present and future education nonparticipation.

In the lives of most of the study participants, academic success was not common at school, at home, or in their neighborhoods. Most of their parents, many of their siblings, and most of their neighbors did not complete high school, and they worked in blue-collar jobs, farmed, or were on welfare. With the exception of one study participant, their encounters with high school and college graduates were minimal outside of school. Although, their parents valued education and generally believed in the efficacy of schooling, the negative displays of its benefits in their lives contradicted any positive expectations they had. Without many examples to follow, or from which to model their own lives, authentic connections between effort and reward were difficult to find, resulting in their parents' hesitancy to "push" them to achieve, and in some cases, to complete their studies.

To further enhance these inclinations toward noncompletion, the schools which they attended acknowledged their low expectations by suppressing their academic needs and encouraging several of them to prematurely leave the system. Some were labeled as *slow learners* and prevented from participating in regular school activities, while others were mainstreamed and showcased as *slow learners* for their classmates. Still others were placed in nonessential classes for superficial credits, such as "Football", and others were advised to "go to work" given the reason that school was a "waste of time" for the type of jobs they were identified as being able to secure. Regardless of their decisions to stay or not, none of the study participants acquired adequate basic skill competencies for flexibility or upward mobility. Whether the individual graduated, attained a GED, or dropped out, the lack of "book" skills have marginalized their choices.

Furthermore, all of these men were required to accept early responsibilities for the welfare of themselves and, in most case, for their families as well. Several missed school to work and others found themselves having to leave school entirely to help supplement their families' incomes. Some of their responses to these early responsibilities were acted out through school disengagement and resistance, including nonparticipation, inconsistent attendance, disruptive classroom activities, and crime. Particularly, where the father was absent, these men disclosed their feelings of lingering anger and disappointment in *missing out* on a father-son relationship, and perhaps, the possible "push" they would have received to do better in school.

Commonalties in their school cultures were also found throughout their testimonies. Each of the study participants talked about the low expectations their schools had of the students attending college, and in some cases, of students even graduating from high school. Even though they attended different schools, information about career and academic opportunities was scarce and, most did not receive any guidance concerning their future lives. In general, colleges did not visit their schools, at least that they were aware, and discussions about future aspirations were muted among peers, teachers, the guidance personnel, as well as within their families. Only one study participant received advice about college, which he received from his mother during his senior year, not from his school.

All expressed their disappointment in the school's inability to provide them with the needed knowledge for future opportunities. On the other hand, none of the study participants *blame* the schools for their lack of achievement, instead, they *fault* themselves and feel they should have studied harder, paid better attention, and "skipped" less, and perhaps they would have their diplomas and degrees, or at the least, a better command of their basic skills.

Psychosocial and Sociocultural Influences

Collectively, their narratives tell the same story of poverty, low academic achievement, early responsibility pressures, and low parental encouragement to attain academic and economic success. Collectively, their early cultural experiences, defined as that which determines how people interpret and mentally organize their worlds, dictated their ways of thinking, attitudes, beliefs, and the manner in which they interface with education. Although their experiences varied, as did their race, they ultimately ended up in the same place, expressing similar ideas and beliefs, with similar aspirations and perceptions of opportunities. Each expressed a strong sense of agency or self-efficacy, that served to mediate their limited perceptions of opportunities.

When the study participants responded to questions pertaining to their school experiences, they expressed disappointment about the non-caring attitudes and insensitivity felt by their elementary, middle school/junior high, high school teachers, and administrators. Reasons given for resisting school and contributing to their decisions to leave school, whether mentally or physically, included the belief that teachers and other school officials were not interested in their success, that they failed to provide them with the support and encouragement needed to persevere their educations, and seemed anxious to "push them out" of the system entirely. In response to their frustrations, these study participants resisted through acts of clowning, skipping school, 'getting by," and eventually dropping out. Those that remained to graduate, just as those who left early, found themselves ill-equipped with a solid foundation in basic skills, and faced with the reality that school had failed them. From their viewpoints, if teachers had cared and felt compelled to ensure that their students learned their lessons, many of them might have stayed. But, because from their observations, teachers did not care, there was no reason to stay. "They didn't teach me nuthin!," so revealed the study participants, so why waste the time?

Sociostructural Influences on Nonparticipation

Discrimination is another factor that connects the lives and experiences of the study participants. Based on their individual testimonies, they faced academic, class, and race discrimination in

various forms, throughout their school careers. However, their perceptions differ relative to how these factors have influenced their lives, and their respective responses.

As evidenced by the testimonies of the study participants, the schools in which they attended appeared to be inadequate and lacked, in some cases, the basic materials needed to provide the students with a decent education. One study participate spoke of having to share a book with as many as 20 other students, another spoke of having to study from text books that were at least three years behind their grade level. Another recalled being tracked into a "Special C" class for handicapped and slow learning students, and never being able to move into a regular class. Throughout their testimonies are numerous examples of constraints placed on these men as young boys, that served to shape their attitudes toward school and the meaning it has for them.

The treatment some of these men received, was obviously based on class differentials, but was not usually interpreted as such, primarily because everyone around them was exposed to the same treatment. Even though many of the schools were unduly equipped with inadequate teaching materials and delinquent curricula, most of these men were blind to the discrepancies. Because these conditions were common within the context of their lives, little attention was paid to what others outside of their social milieus were receiving. Although, in most cases, they realized that people with more money lived differently, it was easy to overlook any differences when commonly sheltered from wealthier circumstances. The "class culture" of these men was simply viewed as a normal and accepted way of life.

However, some of the nonwhite participants indicated having been treated differently because of their race. Because of their contact with white schools during sports events, glimpsing white children of their same ages with different books, and, being told by their teachers of their "second-hand books," most of them were aware of the discrepancies. Thus, these participants attributed these discrepancies to race, rather than class discrimination, and accepted it as a way of life and out of their control.

Their narratives suggest that they chose to readjust their lifestyles as not to allow such constraints to interfere with their personal well-being. They each refused to view themselves as "victims" of these inequities, but as "adapters" to the circumstances. Therefore, they have been able to maintain a belief that their opportunities for success are just as boundless as anyone else's, and have assigned "blame" to themselves, rather than to their skin color or low SES. Their interpretations of structural inequalities discount any responsibility of society for their marginalized opportunities. By not blaming race or class, and maintaining a view of limitless opportunities, these men can continue to work each day with dignity an pride. As long as they feel they have the power to control the boundaries of their opportunities, as defined by them, then they can continue to strive to improve their quality of life.

Since these men were not exposed to an abundance of career and academic options, they set their goals and expectations within the parameters of their limited knowledge and experience. Even when talking with their children about the value of education, most of these men have encouraged them to complete high school, but have also encouraged them to "get a job" or "a trade." Thus, informed by their own experiences with education, they want their children to avoid educational disappointments and be better prepared than they. In their eyes, work is a sure path to success; education has not yet delivered on its promise.

Perceptions Limiting Participation

The majority of these men have internalized their shortcomings regarding their low basic skills and inability to perform successfully in school, and, thereby, blame themselves for their circumstances. By blaming themselves they remain intellectually and mentally capable of achieving academic and work success. And, if they had expended more effort, skipped less, paid attention more, and turned in more homework, their grades would have been better and they would have learned to master the basic skills, and perhaps, in some cases, graduate and attend college. Through acts of resistance and avoidance--displaying disruptive behavior, skipping classes, failing to turn in homework, and eventually dropping out--these men were able to salvage their self-respect and maintain their dignities by channeling attention away from their academic

abilities. They refused to allow the system to dictate the way they feel about themselves, and readjusted the purpose of school for their own benefit. They found ways to mediate and respond to structures that seemed counter to their own experiences, and adjusted their responses to meet their needs and to more closely "fit" within their own experiences. The interface between the concept of agency (self-efficacy) and their perceived opportunities is a constant theme in the lives of these 13 individuals.

Contrary to their high esteem concerning their work abilities, the study participants expressed attitudes of uncertainty about their abilities to perform successfully in traditional school settings. Questions pertaining to their view of themselves as *intelligent* or *smart*, revealed that they perceive themselves as *intelligent*, but not *smart*. Smart, as described by these men, unanimously, means the "ability to make As", or high grades. Intelligence, on the other hand, refers to the capacity to learn new material, to perceive logical relationships, and to be able to use one's knowledge to solve problems and respond appropriately. They did not, however, translate intelligence into successful academic performance--making As. This way of understanding their own interaction with education, and the meaning it had for them, may explain why these men are able to maintain confidence in their ability to learn and find other avenues of learning outside the classroom that continue to affirm their abilities. Again, this sense of *agency*, the ability to maintain self-efficacy by redefining traditional meanings to more closely suit their own realities, is common among all the study participants. As long as they are learning, the classroom is insignificant.

The school system has failed them in the past, and their world experiences have not offered much hope that improved academic skills will reap any additional benefits worth the risk of participating in further schooling. Although they blame themselves for their low academic achievement, they also pride themselves for their work accomplishments. Because they have accomplished education's main goal--a job-- it is not viewed as a priority nor a must. They are working, and that is all that matters for the present moment.

Findings

The findings of this research suggest several variables which inhibit adult education participation of blue-collar male workers with low-literacy skills. Variables ranging from psychosocial, sociocultural, and sociostructural tend to work together to help develop prospective learners' orientations toward education participation. These include negative school experiences, family influences, work orientation, exposure to opportunities, and one's aspirations, which carry over from youth to adulthood, influencing school resistance/disengagement during youth and nonparticipation in education programs during adulthood (Table 1). Findings also suggest the

Youth Experiences Carried Over to Adulthood to Influence Nonparticipation

Youth Experiences		Adulthood Meanings
Negative school experiences	⇒	Nonparticipation in adult education
Low academic achievement	⇒	Low "academic-esteem"
"Hidden" opportunities	⇒	Aspirations restricted
Success redefined	⇒	High "work-esteem"

connection between "academic-esteem" and "work-esteem," as important determinants for understanding reasons for nonparticipation among this group of individuals, identifying high work achievement in adulthood, as a replacement for the low-academic achievement they experienced during their school years. Because education came to symbolize frustration and failure, and "unable to do much" for these men, they redirected their strategies for success toward the workplace. *Work*, then, became, for these men, the "measuring stick" for achieving success rather than *education*, the conventional "key" to success. And, in order to maintain self-esteem,

pride, and dignity, encounters with formal schooling are not approached with urgency--more often than not, formal education is avoided.

The additional findings in this study suggest that sociostructural factors, including race and class differentials, particularly in regards to school, affect individuals in different ways. While all of the respondents disclosed awareness of the limitations placed on groups of people because of race and/or class, these men chose to disallow its elements to *victimize* them. Although their exposure to opportunities was limited, and often "hidden," these men adjusted their aspirations to fit within the realms of their perceived opportunities, and began striving for achievement within the walls of their realities. Their interpretation of these opportunities are directly linked to their perception of education, and operate to influence their need for education and subsequent participation. In other words, individuals make decisions based on what they know, and as one participant put it, "If you don't know nuthin', you can't do nuthin'. These findings illuminate the strong sense of agency these men possess as they found ways during youth and continue to find ways as adults to mediate societal constraints. Similar to MacLeod's (1987) findings, "Aspirations provide a conceptual link between structure and agency because although they are rooted firmly in individual proclivity (agency), they also are acutely sensitive to perceived societal constraints (structure)" (p. 148).

Finally, the findings suggest that lifeworld experiences, beginning with a recollection of past experiences, cannot be separated from the individual's present day or future anticipated experiences, if full understandings are to be gleaned. Holistic approaches to understanding human behavior must be applied when trying to understand the complex lives of adults and to understand their reasons for not participating in adult education programs. Through the voices of 13 blue-collar male workers with low-literacy skills, a greater understanding of their struggles and experiences helped to disclose the meanings they attach to education and illuminate variables that influence nonparticipation in adult education programs. It is the hope of this researcher, that more consideration will be given to studying people from their perspectives, rather than from assumptive positions, so that we begin to dispel the deficit views that flow throughout adult education literature.

Implications for Practice and Research

This research has implications for understanding nonparticipation of low-literate and low-skilled working adults from their world view. It takes the socio-historical context of the person's life into account and places reasons for nonparticipation within the context of their experiences with school, its culture, family and community influences, race, gender and socioeconomic differentials, personal aspirations and their perception of the opportunity structure. More importantly, this research has implications for providing some answers about school based approaches to adult education and calls for practitioners to rethink traditional methods for reaching this growing population.

Considering the adult within the context of his/her experiences from all aspects of life, and not just from the point of adulthood, is important for understanding participation behavior. When designing and implementing programs and marketing strategies, we must have an understanding of where the adult has come from before we can truly know where he/she is going. By dialoging with the individuals who we hope to more fully understand, we can better know how they have organized their world and the meanings they attach to their experiences.

From the historical perspective, the findings suggest the importance of developing stronger aspirations in young people if we, as adult educators and researchers, want to include them in adult education programs during adult years. Aspirations, however, are developed based on one's exposure to opportunities and the subsequent information pertaining to realizing these options. These factors must be considered when assessing the needs of the eligible adult learner, because if the aspirations do not fit the goals of the classes, then to expect participation will be fruitless. This research calls attention to the importance of understanding the learning needs of prospective adult participants and the meaning learning has for these individuals.

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Using Transformative Learning Principles To Improve Training Programs For the Economically Disadvantaged

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The problem addressed by this research is the absence of indicators by which to evaluate the educational components of Job Training Partnership Act (JTPA) training program proposals. Although there has been 50 years of professional experience in adult education, JTPA evaluations are not informed by this experience. The research developed a manual that will allow members of Private Industry Councils and Service Delivery Area staffs to evaluate the educational components of JTPA training program proposals.

The initial needs assessment conducted for this project led the investigator to think that there were training programs being conducted within the Job Training Partnership Act (JTPA) system that led to the development of transformative learning and perspective transformations for the participants. Furthermore, it was the personal bias of the investigator that training programs resulting in transformative learning and perspective transformations were desirable for the JTPA population.

Purpose of Study

The research developed a manual that will allow members of Private Industry Councils (PICs) and Service Delivery Area (SDA) staffs to evaluate the educational components of JTPA training program proposals. The manual provides them with the information needed to be capable of recognizing transformative learning principles and practices as they evaluate training proposals. To accomplish this the investigator conducted a study that researched theory and best practices and collected adult education examples of transformative learning principles in use in the JTPA system. The study also included data collected from JTPA program participants and administrators. The findings of the study were then used to develop the manual. The manual was created as a product that is an integration of both theory and practice in the field. It is also a product of a needs assessment conducted with administrators and participants in the JTPA training system.

The manual is informed by a review of the relevant literature in adult education, job training and the JTPA environment. It is also informed by a survey of best practices in the JTPA environment and a needs assessment conducted with JTPA training program participants, administrators and providers.

Rationale and Significance

To successfully serve its intended population, the JTPA system must deliver much more effective training programs. When the education adults participate in is based on sound adult education practices, the chances of it being significant and meaningful to them is much better (Knowles, 1980).

Eighty percent of the people entering the workforce in the year 2000 will be in what are known as the minorities classifications. They will also be from a group of people that are likely to have multiple barriers to employment. The task of the JTPA System will become more and more difficult. As it does there will be a greater need for a means to evaluate training proposals for their adult education value and efficacy. Mere placement in a job will

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not be a good enough indicator. The nature of the jobs JTPA participants will assume will require them to make numerous shifts in their perspectives. The jobs will require training and retraining as systems and organizations change.

The job holders of the 21st century will have to be lifelong transformative learners. Employing adult education and transformative learning principles to the training for these individuals should be a priority. Basic learning and adaptability to change is a prerequisite to gain access to and satisfactorily perform on even entry-level jobs (Levitan and Gallo, 1988). The system should prepare participants to function effectively in the available jobs. Those jobs will be increasingly more complex and require higher ordered skills; more so than ever before in our country's history (Carnevale et al., 1990).

The overwhelming majority of the programs now funded in the JTPA system will not be up to that challenge. The system has already been assessed by many as falling short of its purpose (Bovard, 1990). The JTPA incentives for the SDAs and those conducting the programs focus only on job placement.

Improved training programs could be developed and funded as a result of PICs using the manual developed for this project. If the training is fundamentally sound and well grounded in adult transformative learning principles the participants will be much better prepared to assume meaningful and lasting jobs in society.

One way to meet the new challenges faced by the JTPA system is to develop training programs grounded in transformative adult education principles. The only way to know the funded programs are grounded in those principles is to have a means of helping JTPA volunteers and staff evaluate the program proposals. They must make that evaluation based on the adult education value and efficacy of proposed programs coming before them for funding.

The manual developed for this project will be one small part of the answer to the problems outlined. It will be a first step in the process needed to bring about changes in the system. These changes are needed to make it more probable that the programs will more fully meet the needs of the JTPA participants.

Literature Review

This study was concerned with the development of a manual to be used to evaluate the educational components of proposals for JTPA training programs and those training programs involve the training of adults. Since this is the case, it was important to review literature related to the adult educational theory, philosophy, principles and practices, and research. It was also deemed important by the investigator to consider the literature concerning transformative learning. At the time this study began, it was apparent that no consideration had been given to the use of transformative learning principles in the formulation of any existing guidelines, for evaluating JTPA training program proposals.

This research has drawn on the literature in several areas of adult learning, development and transitions. The primary focus of the literature search has been on perspective transformation and transformative learning theory, job training, the practice and philosophy of facilitating adult learning and education, evaluation of adult education program proposals, qualitative research methods, and development of manuals, guides and reference materials. The research is grounded in the theory of how adults, especially economically disadvantaged adults, learn and how they make the transitions in their lives that allow them to transcend the limitations put on them by societal factors.

Qualitative Research Methods

The development of the manual for this research project depended on qualitative research techniques and the data collected through those techniques. Critical incidents, interviews and

questionnaires were administered to participants, administrators and officials in the JTPA system. The data collected from these instruments, in part, determined the need for and content of the manual. There was also a questionnaire administered to evaluate the structure and content of the manual after it was developed. In this way qualitative research determined the outcome of this project.

Methodological Stages

The development, publication and evaluation of the manual resulting from this study followed several stages and steps in the process of completing the final product.

Literature Review

- Comprehensive literature review of adult education theory and practice, qualitative research methods, job training and the JTPA environments, and the development of manuals.
- Data collection and qualitative research methods determined from the literature on qualitative research methods.

Needs Assessment

- Needs assessment conducted in the New Jersey JTPA environment, including data collected from training program participants, administrators and providers.
- Administered critical incidents, interviews and questionnaires to participants, administrators, officials and providers in the New Jersey JTPA system.
- Determined the need for and content of the manual using analysis of the data collected in interviews, critical incidents and preference inventories.
- Survey of best practices for training program design and program proposal evaluation in the New Jersey JTPA environment.

Field Testing

- Field tests were conducted for the instruments used in the collection of data.
- Field tests were conducted to assess the first drafts of the manual after it was developed.

Evaluation

- Questionnaire administered to collect data for the evaluation of the content and structure of the manual after it was developed.
- Manual revised based on analysis of the evaluation data.

Needs Assessment Stage

To accomplish the objectives of the needs assessment phase of the project, over 70 critical incidents were distributed to individuals in three SDAs in the state of New Jersey. A total of 51 subjects completed and returned critical incidents for the data collection effort.

There were also 20 interviews conducted; 13 of those being with program administrators, JTPA officials, adult educators and training program vendors, and 7 of them with former participants in JTPA funded training programs.

The subjects for the interviews were selected based on them being a representative sample of the participant and administrator/provider perspectives in the New Jersey JTPA environment and their accessibility to this researcher. The vendors/providers were selected because they came from a variety of organizations doing business in the JTPA system and represented a horizontal slice of the types of services provided in the system. They were conducting programs that had outstanding reputations as well as those that had programs that were judged adequate but not outstanding. The administrators, officials and adult educators were selected based on their experience in and broad knowledge of the New Jersey JTPA system. The program participants were selected from programs that had been identified in a survey conducted to determine best practices in the New Jersey JTPA system.

The initial needs assessment conducted through informal inquiries with some individuals involved in the JTPA system, along with the literature review conducted early in this study, gave the investigator a basis for formulating the critical incidents and interview schedules. The first drafts of the critical incidents were developed from questions strongly suggested by the initial literature review. That literature suggested some of the areas of concern if the study was to discover the elements in training programs that would support a transformative learning environment.

Based on the writings of many of the authors and researchers in adult education and specifically in perspective transformation, the investigator was able to formulate what seemed to be the key issues involved in programs fostering major changes in participants' perspectives or frames of reference. Some initial conversations with program participants also provided issues to be the subject of the inquiry. The objective became one of determining how actual participants in JTPA programs would articulate the thoughts, feelings and meanings of training experiences that provided them with a perspective transformation or shift in how they regard themselves and their roles in society. The investigator focused on formulating a series of situational inquiries and questions to which participants and others could respond. To do that the respondents had to indicate the most pertinent factors that made a difference for them in the training experiences.

The investigator was able to formulate those initial instruments and refine them through the field tests. These instruments provided the data that were used to define the factors needed in training programs to foster transformative learning environments. The factors were then formulated into criteria to be used to evaluate training program proposals for inclusion of transformative learning principles in their design.

People who had been participants in previous JTPA training programs were identified to participate in the field testing and data collection phases of the needs assessment. The investigator found participants in programs that produced graduates who entered employment and retained their jobs for extended periods of two or more years (generally these programs are regarded as exemplary). The investigator also found participants in programs that are more typical of the programs being conducted. These programs often produce graduates who hold jobs only on a temporary basis. This was done to get a view of the total spectrum of programs being conducted in the JTPA system.

Summary of Needs Assessment Findings

The collection of 51 critical incident responses and 20 interviews provided a large enough data base to be able to generalize and formulate patterns of the essential needs assessment elements.

A total of 29 themes were identified in the data. The 29 themes were organized into 7 categories or mega-themes. These categories were then used to outline the topics to be covered in the manual as features of training programs to look for in the proposals. These categories were:

- Learner Autonomy
- Outcomes
- Instructional Staff Qualities
- Resources
- Instructional Methods
- Environment
- Timing, Organization of Topics

The categories were also used to organize the other parts of the manual. They were combined with the findings of the literature search to formulate the sections of the manual that discussed the topics of:

- Adult Education Theory
- Principles of Adult Learning

- Adult Student Characteristics
- How Adults Learn
- Instructor/Facilitator Characteristics

Information Needed to Design Materials

The objective of this research was to develop a manual that incorporated these kinds of indicators in the training program proposal process. To establish this kind of manual it was necessary to collect data on what indicators could be used to assure a difference for participants in these proposed training programs.

To develop guidelines for evaluating the training program proposals, qualitative research methods were used to define those guidelines. The guidelines were developed from an understanding of how adults learn, how they view the world in which they live, and what is needed to support the process of transforming the participants frame of reference. Understanding these elements was necessary because these were the elements that came out of the initial literature review and needs assessment.

The economically disadvantaged adults that are participants in JTPA funded training programs have a perception of the world that differs radically from that of someone not facing the barriers to employment they see in their lives. If they are to overcome those barriers they must undergo a perspective transformation (Mezirow, 1990, 1991; Finger, 1989). In order for the investigator to understand the participants frame of reference it was necessary to gain an appreciation of how they view the world and the barriers. The reality of those participants is ever changing and fostering knowledge of how to cope or deal with those changes has to be the objective of the training they receive. Understanding the meaning of their experiences and the process of perspective transformation they must undergo is essential to making a lasting impact on their situations.

Needs Assessment Instruments

Based on the review of the literature, the investigator determined the training JTPA participants receive must present them with the opportunity to undergo transformations of their frame of reference. It is impossible to gain any insight into their frame of reference if their words and descriptions are not the key and essential elements in the inquiry (Brookfield, 1987). Interviews and critical incidents are ways to collect the data necessary to gain that insight.

In order to present a point of departure and to give the participants in the interviews a focus for reflecting on their experience, it was necessary to develop and administer a set of critical incidents. These critical incidents helped the subjects and the interviewer spend their time most efficiently in deriving the needed data.

The objective in the inquiry was to determine those characteristics in training programs that seemed to make them more meaningful for participants and included principles of transformative learning. The purpose was to define the factors that make it easier to acquire meaningful life skills in training programs that lead to perspective transformations. According to Mezirow (1991) transforming perspectives involves our sense of self and is a process of becoming critically aware of our assumptions and how they might constrain the way we perceive, understand, and feel about our world. This often facilitates making choices or makes it possible to otherwise act upon these new understandings.

The investigator recognizes the inability of the critical incident technique to assure that the written instructions elicited all the critical elements of training program performance. Because of this, another element was added to the construction of the critical incidents' instructions. Forced choice as well as open choice items were presented to the respondents

for indicating their responses. In this section of the critical incidents they were asked to indicate their preference for or rating of certain elements in training programs. This "preference inventory" provided an additional source of data for formulating the manual contents. It was incorporated in the items in the critical incidents.

Separate critical incidents instruments were developed for use by former JTPA program participants and for administrators, officials and vendors.

In order to pretest the critical incidents and the preference inventories the investigator sent out five copies of each of these instruments. They were sent to five individuals representative of the subject respondents in the research study. A total of ten individuals were involved in this part of the pretest, five for the critical incidents for program participants and five different individuals for the other critical incidents.

It was determined that completed critical incidents had to be received from 30 subjects. The critical factors or elements were determined based on an analysis of 20 interviews and 51 completed critical incident responses.

Critical incident responses were collected from 51 respondents. These respondents included JTPA training program participants and providers of training as well as some administrators in the JTPA system. Twenty interviews were conducted within this same population of subjects to determine the elements of training programs that could help participants make perspective transformations.

Interviews, surveys and preference inventories were used again after the manual was developed. At that point they were used to elicit comments and evaluative data on the usefulness and ability of the manual to meet its stated purpose.

The intention of using critical incidents in the research was to determine those conditions that make a difference between success and failure or an unfavorable outcome in a given situation according to the respondent's perception of the situation. This technique was used in this study to get the subjects (program officials/professionals and former program participants) to recall and describe the feelings, thoughts, actions, behaviors or other elements that made the difference between programs being successful or not being successful for the participants.

Typical of the comments made by the respondents to the critical incidents were the following:

Resources

I seen how much the instructor was showing us and all the equipment that was available. I felt like they were really trying to help us learn more about how we can do good in our jobs.

The book was not really that good. I was bored reading some of the stuff.

The new stuff they were using to teach us was really helpful.

Empathy/No Empathy

I was sure the teacher was trying to help me and was aware of my situation.

What made a difference for me was the way the leader showed that she could see my point and was trying to help me.

I really felt like I was with family or something, they tried to make me feel comfortable.

Learner Autonomy

I could see where this was going to help me when I got a job. I didn't see that all the time, sometimes it took awhile for me to see.

I was starting to feel better about myself. All those other times I was in a job I didn't think I could make it because I was not smart enough.

Missus C... was so kind and caring she always made me feel good even when I cried cause I didn't think I could make it. Remembering all those keys when I couldn't see them was hard but she helped.

I had to do good because Ms. G... was counting on me I know. She let us know she was there to help us, that makes you feel good.

Instructional Methods

I knew I had to work with a group and that wasn't easy because I was usually able to work on my own and keep to myself.

The instructor kept making us come up with ideas as a team he wouldn't let us do it alone.

Comments like these were coded and subsequently used to determine the broader categories or themes that seemed to emerge from the responses to the critical incidents and interviews.

The analysis did not impose a predetermined coding structure on the data. The analysis consisted of initially coding the responses according to their frequency of occurrence and the common themes that seemed to be emerging. A set of descriptive terms that emerged as the responses were analyzed and used to determine the various themes that seemed to emerge from the data. A total of 29 significant themes were identified in the data. These themes were identified by determining which ones were evident four or more times in the responses. The investigator thought any theme that was evident in four or more instances was a good indicator of an item or issue to be addressed in the manual.

The 29 themes were grouped by commonality in terms of the adult education and training issues or ideas they seemed to be addressing. The 29 themes were then organized into 7 broader categories or mega-themes. Since the mega-themes were based in the adult education and training arena it was deemed logical that these would be sections or topics to be addressed in the manual. The categories were then used to outline the topics to be covered in the manual as features of training programs to look for in the proposals.

Limitations of the Study

The manual has been designed, developed, field tested and evaluated. The setting for this has been the JTPA environment represented by three PICs selected from the SDAs in the state of New Jersey.

The manual is not expected to transform the users into accomplished program proposal evaluators. It is intended only to provide information that will enable users to recognize and apply transformative learning principles and practices in the proposal evaluation process. To transform the users into accomplished program proposal evaluators would require training and time to practice the skills of proposal evaluation. Nor is it expected to completely reform the JTPA system evaluation processes. Rather, the use of this manual could contribute to improving the effectiveness of the proposal evaluation process within the JTPA system.

The manual will provide a first step in the process of improving the JTPA training program proposal evaluation system, even though it may be just a small step. The major part of the improvement will come when the programs are conducted using adult education principles as the guiding philosophy. However, the overall evaluation and improvement of the program implementation is beyond the scope of this project.

Evaluation of the impact of using the manual, developed for this project is also beyond the scope of the original project. It is hoped that others will take up the challenge of conducting further research study in this area. Evaluating the effectiveness of the manual in actual use in the proposal evaluation process would require a separate project. It could only be done after the manual is in use for some time.

The guidelines were developed for training program proposals in a generic sense. It is possible that training programs of a specific nature or type may not adhere to the findings of this study.

Nevertheless, the investigator does think the guidelines published in the manual are useful and can improve the proposal evaluation process. Users of the manual should approach it as transformative learners and critical thinkers and challenge and validate the

assumptions undergirding the manual's development. Not to do so would violate the principles upon which the guidelines have been developed.

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Supporting the Career Development of Older Employees: an HRD Point of View

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In 1995 a quantitative exploratory survey into educational conditions promoting the career development of older workers was carried out in a multinational chemical corporation. Educational conditions are defined as demands made on the corporate HRD-policy, HRD-activities and employees' willingness to learn, as well as stimulating factors that promote the career development of older workers. Although the corporation is willing to perform an age-aware personnel policy, results indicate that this still concentrates more on younger employees, that participants in the career development process are insufficiently stimulating in their role and that the traditionally formal HRD-activities have little effect on the career development of older workers. This paper describes the survey, highlights its major results and offers possible recommendations to improve the existing situation.

Many organizations are confronted with an ageing workforce. This development may cause a problem since older employees are often viewed as less mobile and flexible and therefore less able to deal with rapid changes occurring in many organizations. The mobility of older employees in organizations is therefore an actual theme in personnel management in the Netherlands (Alaerds, 1994; Van der Heijden, 1995). One solution to this problem might be to increase the educational efforts specifically aimed at older employees. However, research has shown that most training activities are directed at young 'high potentials' rather than older employees. One reason for this is the unfounded stereotyping regarding older employees: since they are considered in advance to be inflexible and not motivated towards change, training is not considered an appropriate tool for updating their qualifications (Boerlijst, 1993). Furthermore, there is little investment in training older employees as employers doubt whether this investment will "pay off". According to some authors (Boer-lijst, 1993; Van der Kloet, 1994), this may be the key reason for older people not functioning optimally.

One of the questions frequently posed in articles on mobility is: how can human resources developers positively contribute to mobility problems (Van der Zee, 1995)? This paper addresses possible answers in response to the career development problems of older workers from an HRD point of view.

Mobility is, in essence, a career planning and -management question (Boerlijst, 1993; Paffen, 1991). The growing interest in mobility is created by at least four developments. The first development has been already touched upon. Many organizations have to deal with an ageing work force and thus feel the need to come up with policies that take this factor into account. Another development is that organizational structures have become 'flatter'. Whereas in the past bigger always meant better and organizational growth was a major goal of companies, nowadays there is a trend towards smaller, leaner and less hierarchical organizations (Daft, 1992). As a result, there are less possibilities for logical vertical career moves. A third trend is that working contracts are more flexible. Lifelong employment will be the exception for personnel of all ages: corporations have a fixed core staff and during busy times personnel are only hired temporarily. It is important to keep in-company staff flexible and open-minded so they can easily be switched among employers. A fourth trend is the growing responsibility of employees for their own career development. In the past employees became more or less 'passive' regarding their career the moment they entered an organization. Employers were responsible for the planning of careers and gave employees little control over their own progress through a company, preferring to place and promote without consultation (Beer, 1984). Under the current uncertain economic conditions this attitude no longer

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suffices. Employees are expected to be self-supporting and to plan their own careers, a responsibility switch which is especially new to older employees.

Many organizations, confronted with these trends, are looking for solutions. Given the fact that it is *people* within organizations who sell and market, develop and create products, take decisions and implement programmes, human resources are vital to an organization's succes (Caligiuri & Stroh, 1995) and should be monitored carefully. Not having the right skilled people when they are needed might seriously undermine the success of strategic business choices.

One of the appropriate tools frequently mentioned in career management literature for keeping staff updated and ready for change is Training and Development. However, this theoretical statement has been insufficiently translated into practical conditions and implications. For this reason, a *quantitative exploratory survey* was undertaken in a large multinational, multi-sited chemical corporation in 1995. The purpose of this research was to gain a full picture of the problems and educational needs of ageing workers in order to optimize educational strategies and career policies.

Starting point for the research was (Rhebergen, 1995): *what educational conditions support the career development of older employees*? This paper addresses (1) the theoretical framework used, (2) the research design, (3) the major results, (4) the conclusion and discussion of the contribution HRD-specialists could make regarding the career development of older workers.

Theoretical framework

In order to solve the problems of an ageing work force, an age-aware approach is essential to meet the mobility needs of older employees. In this paper an age-aware personnel management is defined as preventative policies aimed at keeping people healthy and productive for as long as possible (Rhebergen, 1995). The word preventative is of special importance: if organizations succeed in taking appropriate steps from the outset of people's careers, reactive curative policies at an advanced age are superfluous. With age-aware personnel management, human resources management and development activities apply to all employees regardless of age, though they make allowances for special needs at different age and career stages. The boundary between 'old' and 'young' is arbitrary because of the different ages mentioned in the literature. No curative policy is required if preventive action has been taken. So, the boundary needs to be at a relatively young age. For this research, every employee 35 years and older was defined as an older worker.

Career development is a sub-discipline of age-aware personnel management. The term 'career' is defined here as an individually perceived sequence of attitudes and behaviours towards work experiences and activities over the span of a person's life (Hall & Goodale, 1986). Typically, the term connotes upward mobility and aspiration. From this perspective, career management is not thought of as being important for people who make career moves in a horizontal direction. Under the current flatter structures, a broader concept of a career seems to be under discussion. Career development nowadays means development in both a vertical and horizontal direction (Paffen, 1991). Individual careers evolve from an interaction between the competencies and career goals an individual brings to the organization and the work experiences and possibilities the organization provides (Beer, 1984). Effective human resource flow policies and practices must allow a continuous process of matching individual career needs and organizational requirements. This statement underlines the importance of personal career planning and management. Personal career planning is a process which the person, and not the organization, manages. To do this, employees need an insight into their own knowledge, skills, expectations and possibilities. The organization's role in this is to coach, advise and provide learning activities for self-inquiry. It is generally accepted that the more control individuals have over their career choices, the more likely they will choose a career path fitting their core competencies and values, thereby ensuring satisfaction and growth (Beer, 1984). The major goal then is to plan careers which embody new tasks and learning activities and which, regardless of the career direction (vertical or horizontal), guarantee personal learning.

However, learning activities have to meet certain conditions to be constructive in career development. A literature review was done to find out what these might be. This revealed the importance of three groups of conditions, namely those related to policy, HRD-activities and to the individual worker. Figure 1 shows an overview of the found conditions in relevant literature. These conditions

don't guarantee career development, but should be seen as facilitating career development. They function as a theoretical basis for developing research instruments.

Figure 1. An overview of educational conditions (Rhebergen, 1995)

Policy conditions	Conditions related to HRD-activities	Conditions related to individual workers
• awareness of older workers' problems • providing resources • strategically embedded measures • inspiring line managers' role • open communication • adapted rewarding resources	• creating an appropriate learning climate • paying attention to individual learning needs • paying attention to personal career planning • an age-aware instructional method • paying attention to the (re)training of line managers in their coaching role	• a learning attitude • critical reflection/self assessment • entrepreneurship towards own career • creativity

In short, the policy conditions imply that age-aware personnel management starts with a strong *awareness* that the way older workers have been treated in the past creates flexibility problems within organizations (Boerlijst, 1993). Next, organizations have to provide material and immaterial *resources* to improve this situation. Measures have to *fit the strategic choices* made (Hall & Goodale, 1986). Since human resources management within organizations is largely the line managers' responsibility, they need to fulfil an *inspiring role* towards older workers. The internal corporate career policy has to be *communicated openly* so that people can anticipate the requirements (Paffen, 1991). An additional but not necessarily condition is an *adapted reward system*, including both material and immaterial rewards, like recognizing older workers' development.

HRD activities are broadly defined as including all structured learning activities like training, or courses as well as learning-on-the-job. A first condition related to HRD activities is the creating of an *appropriate learning climate* in which people are challenged to learn continually (Begeer, 1990). An appropriate learning culture pays *attention to the individual educational needs* of employees because every individual is unique (Hall & Goodale, 1986). Next, employers should give their employees insight into the *process of personal career planning* (Boerlijst, 1993; Paffen, 1991). The shift towards personal career management is only possible if employees are equipped with the appropriate knowledge of this topic. HRD activities must be designed in accordance with *age-aware instructional principles* like the giving of constructive feedback and an adapted social and logistic learning context (Thijssen & Prevoo, 1994). Finally, *line managers have to be (re)trained* in their coaching and inspirational role. Conditions at the individual level relate to the *learning attitude* of older people (Boerlijst, 1993; Hall & Goodale, 1986). A "good" learning attitude is characterized by the *willingness to learn*, a healthy *critical view* on people's own possibilities, an entrepreneurial attitude towards one's career and the ability to *view* changes creatively as a "chance" and not as a "threat".

Research questions

Most of the problems regarding career management are dealt with from an expert or specialist perspective. Little research, however, is done into gaining an insight into workers' perceptions. This type of research will add to current career management theories so that these perceptions are examined. Also, daily practices in multinationals concerning education and career development pass via stakeholders and participants in the career development process, so that their role has to be examined too.

Thus the main research question is:

'What educational conditions influence HRD activities which support the career development of older workers and what is the role of the line-manager, employee and personnel management specialists (the career specialist and the HRD specialist) in this process?'

This main question is divided in the following research questions:

1. to what extent is HRD policy perceived as directed at older employees?
2. to what extent do older workers perceive their line manager, personnel and career development specialist as being stimulating with regard to HRD activities and career development, and to what extent are they themselves mentally alert and willing to learn?
3. in the opinion of older workers, which HRD activities contribute to career development and to what extent are the careers of older employees currently being developed?

The last subquestion provides an insight into the functioning of HRD specialists and the quality of their advice.

Research design

An exploratory survey was chosen because of the 'how' type research question. To answer the research question a questionaire was developed and personnaly delivered to members of the target research group. In total 312 middle level employees received a questionnaire. Of these, 225 completed the questionnaire; a response rate of 72%.

The questionaire consisted of items related to six groups of variables: existing HRD policy, the role of line-managers, employees, the personnel department (as an 'umbrella' for mobility and HRD), career development specialists and HRD activities. The questionaire was developed in three phases to ensure validity and reliability.

The statistical analysis began by investigating the non-response group. This analysis showed that non-response rates between sites were comparable; no systematic deviations were found. With regard to the average age of the response and non-response group, the analysis showed that it was the more older workers who refused to cooperate. Nevertheless, the differences between the groups were very small (the response group was only 1.1 year younger on average than the population). We therefore concluded that the nature of the non-response had no serious consequences on interpretating the results.

The second step consisted of analysing the six groups of variables. A frequency analysis was performed by comparing the criterion for a sufficient condition, 60% agree, with actual scores. Then, a ANOVA-analysis was carried out to see whether there were differences between different sub-groups. For example, were there differences in perception between relatively younger and older employees. Finally, regression-analysis was carried out to search for relations between variables. The results of these last two steps are not shown in this paper because they are of particular in-company value.

Results

Only the general trends are high-lighted as it would go far beyond the purpose of this article to describe all the results in detail. A selection has been made of the major results and represented in tables.

Concerning the first research question of whether policy is directed to older workers, examination of *policy* conditions revealed that the flexibility problems of older workers are recognized in policy statements. An explicit, strategic item in the company studied was improving the working climate for older workers. However, according to the results, this written commitment has not resulted in taking real improvement action, so we can conclude that the management is still not committed optimally to the perceived problems of older workers.

Table 1. A selection of the key response rates to questions on policy

	percentage of respondents in any category			
	totally agree	partly agree	partly disagree	totally disagree
1. Personnel policy is embedded in strategic policy	6	41	35	16
2. The employer is willing to invest in HRD activities that promote career development	43	47	6	0
3. HRD policy is sensitive to age-related needs	3	21	44	29
4. The employer teaches employees the basic principles of personal career planning	2	16	30	51
5. Employees have sufficient information on career interventions	2	12	30	54

Personnel management is not embedded optimally in corporate strategy (only 47% of respondents partly or totally agree; see table 1), while strategic, age-aware choices are not yet fully communicated top-down through the organization. The greatest obstacle for an age-aware personnel management is not a financial one: older workers believe management is willing to invest in career development education (90% of respondents partly or totally agree). However, in their opinion (73%) HRD policy could be more sensitive to their needs. Although older workers participate in HRD activities, this doesn't always meet their expectations. Personal career planning receives little attention in educational policy (18% of the respondents partly or totally agree) and employees are too little informed about career interventions to anticipate adequately (14% of the respondents partly or totally agree).

With regard to the second research question, the roles of the various stakeholders and participants in the career development process, results show that line-managers are seen as the most stimulating and facilitating. Considering the fact that recent personnel management views show that human resources management tasks are delegated to line-managers, this is a positive point. Line-managers however, are not optimally prepared and trained for their inspiring role (44% of respondents think they are; see table 2), but most managers had consulted their employees at least once in the past five years about career development and related educational needs (86% of respondents agree), although these contacts decline among older employees. In most cases, line-managers perceive personnel development at all ages as an important task (64% of respondents partly or totally agree).

Table 2. A selection of key response rates to questions on line managers in the career development process

	percentage of respondents in any category			
	totally agree	partly agree	partly disagree	totally disagree
1. Line-managers are trained in their stimulating role	16	28	32	17
2. Line-managers perceive employee-development at all ages as a relevant task	16	48	23	12

Line managers and workers may also consult supporting specialists (personnel department and career development officers) for career advice, though these are generally perceived as not being particularly stimulating and supportive. Older workers take the view that these officers are insufficiently open and accessible to them, unwilling to give adequate advice and show special interest in their career development (see table 3). It is possible that career development effort concentrates on the younger high-potentials.

Table 3. A selection of key response rates to questions on supporting specialists in career development

	percentage of respondents in any category		
	agree	neutral	disagree
Personnel department (PD)			
1. PD is 'open' to/accessible for older workers	50	34	15
2. PD gives adequate advice	8	26	64
Career development specialists (CDS)			
1. CDS are 'open' to older workers	40	41	13
2. CDS give adequate advice	8	27	61

Most respondents see themselves as active entrepreneurs in career development and HRD activities (see table 4). For example, they are willing to learn (97% respondents partly or totally agree) and are capable of dealing with working activities outside their own narrowing defined job function (90% partly or totally agree). The flipside is that they also confirm they have inadequate knowledge about personal career management (42% respondents partly or totally agree) and are badly coached, supported and stimulated by the organization.

Table 4. A selection of the key response rates to questions on employees' career development

	percentage of respondents in any category			
	totally agree	partly agree	partly disagree	totally disagree
1. Older workers are willing to learn new knowledge and skills	64	33	2	0
2. Older workers are capable of performing activities outside their own job function	56	34	5	3
3. Older workers have adequate personal career planning knowledge	9	33	38	19

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The third research question concerns HRD activities and the extent to which careers are developed in the actual situation. To gain a picture of employees' attitude towards HRD activities, they were asked to rate the HRD activities they had attended over the last five years. Analysis showed that all employees had participated in one educational activity at least. Courses and training were the most frequent educational interventions (85% of respondents had participated in a course or training during the 1990-1995 period; see table 5).

Table 5. A selection of the key response rates to questions on HRD activities

	HRD activities over the past five years and the career development relevance	
	%	% very important
1. Courses and training	85	49
2. Job enrichment	49	71
3. Temporary detachments	7	86
4. Participation in projects	56	53

An important point is that these activities are not always effective in contributing to career development (49% of respondents agree). Learning activities related to daily work activities, like job enrichment (71% agree), temporary detachments (86% agree) and working in multidisciplinary projects (53% of respondents agree) are seen as being by far the most important in keeping older workers flexible and in developing their careers.

Taking the overall results, generally we may conclude that the conditions for career development are present. Important reasons stating this are the fact that all employees are participating in HRD activities and their positive self-esteem in remaining flexible and multifunctional. But there are aspects which need improving, especially the supporting role of the organization. These improvements are further outlined in the conclusion and discussion.

Conclusion and discussion

In this paper we have highlighted the major results of a survey into the existence of educational conditions in a multinational, multi-sited chemical corporation; the role of the stakeholders in stimulating career development and the contribution of HRD activities to the career development of older workers.

A first conclusion is that the intention to carry out an age-aware personnel *policy* are good, although daily practices do not always concur with this. Older workers feel insufficiently valued and treated in a age-aware manner. So, there is a discrepancy between "intended" and "realized" policy. Major improvements to the organizational support can be achieved. Regarding the role of various stakeholders, it would be beneficial to (re)define and make clear their specific tasks and responsibilities. *Line-managers* are perceived as being the most stimulating to career development, although they are insufficiently backed up by supporting specialists in specific situations. *Personnel officers* and *career development specialists* are held accountable for advising on career development, but according to older workers they fail in this task. It is particularly important to clearly define the position of these staff and equip them with the necessary instruments and skills to be able to coach older workers. In the current situation the additional value of personnel specialists to line managers is ambiguous. Although older *workers* are willing to learn and see themselves as capable employees, we may conclude that the organization does not succeed in tapping their full potential. Their resulting negative feelings can create frustrations. Instead the organization should apply their rich work-experience and company-specific knowledge to realizing strategic goals.

A second major conclusion concerns the organization's attitude towards HRD activities. Frequently, *HRD activities* like training and courses are seen as appropriate to meet the needs of older workers. This is a traditional attitude. It's commonsense that people attend courses now and then, regardless of the value of the course and its appropriateness to personal needs. An important lesson

for HRD specialists is that the choice of formal learning activities is not always the right one. A renewed attitude is required. Development activities like 'learning by doing', 'learning on the job' and 'individual coaching' are perceived as being far more relevant to career development. It will be a good start to make older people feel important. One possible intervention is to create functions in which older workers can transfer their knowledge and experience to younger workers before retirement. Furthermore, in the composition of (project)teams, a mix of abilities and knowledge of both older and younger staff, thus supplementing each other, needs to be addressed.

A third conclusion concerns knowledge about personal career management. Since employees' responsibility for planning their careers is increasing, employees need to be equipped with relevant knowledge about this. On the one hand this means the organization has to provide all the information for planning careers, like vacancies and opportunities for lateral moves, and on the other develop personal career planning training, in which higher-order planning and self-assessment skills are learned, which prepares employees for their new responsibility for their own career development.

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The Effect of Locus of Control and Performance-Contingent Incentives on Productivity and Job Satisfaction in Self-Managing Teams

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A simulation of employees working in self-managed teams was used to test the effects of locus of control and performance-contingent incentives on productivity and job satisfaction. The only performance effect was that externals in the incentive condition outperformed externals without incentive. Internals were more satisfied with type of work (i.e., self-managing teams), supervisors, and coworkers. Implications for employee involvement approaches are discussed, and recommendations for further research are proposed.

The global marketplace has created a "new age" for American industry. To survive and prosper, the current trend in American business is to focus on quality and value-added customer service. To accomplish this goal, American business is simultaneously rightsizing, restructuring its organizations, and placing new demands on its employees. Organizations are moving toward more employee involvement through the use of self-managing teams. Bureaucratic structures with manager control and employees in fragmented jobs seem to be on the way out.

Employee involvement (EI) has become a popular management approach to obtaining increased productivity and quality from employees. In a survey of the 1990 Fortune 1000 organizations conducted by the Center for Effective Organizations, 313 respondents reported the two biggest reasons for implementing employee involvement were to improve quality (75%) and productivity (66%) (Lawler, Albers Mohrman, & Ledford, 1992). EI advocates suggest that among the EI applications (e.g., job enrichment, quality circles), self-managing teams may be effective in increasing productivity and job satisfaction, the latter of which is though to affect performance quality (Lawler, 1994).

The new management paradigm of employee involvement will be expecting employees to exhibit competencies in self-direction and team skills (Blackburn & Rosen, 1994). According to Lawler (1994), however, transitions to participative approaches have been poorly conceived, have used unworkable approaches, and are destined to fail. Krishnan, Shani, and Grant (1993) reported that many organizations fail due to problems in organizational design and implementation. In addition, there is little research that addresses the identification, selection, and training of employees who will be successful participants in self-managing work groups. Implementing employee involvement will require some changes in human resource management and development practices. According to Blackburn and Rosen (1994), traditional selection procedures may need some rethinking based on the new demands of employee involvement (e.g., self-direction, self-development, and team-development skills). In addition, critical to employee commitment to productivity may be through the use of organizational performance rewards. These rewards ensure employees in a stake in organizational performance. The respondents to the 1990 Fortune 1000 survey indicated that team incentives, profit sharing, gainsharing and stock ownership were the most popular approaches to performance based rewards.

The literature indicates that the success of work design and autonomous work groups may be related to individual worker personality. Personality is a relevant factor in understanding human behavior according to the pioneering psychologists Allport and Cattell (Pervin, 1985). Research findings suggest that personality attributes affect workers' preference for, or dissatisfaction with, autonomous work situations (Hackman & Lawler, 1971, Herzberg, 1968). Various personality traits affect an individual's willingness to accept more responsibility, to work in autonomous situations, and to enjoy job satisfaction. The purpose of this study was to determine if an employee's locus of control and a performance contingent-incentive affect productivity and job satisfaction in self-managing teams.

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Locus of Control

Locus of control (LOC) describes the extent to which a person believes that his or her behavior has a direct impact on the consequences of that behavior. The consequences usually take the form of reinforcements, such as rewards or gratification. Rotter (1966) described the people who believe that they can control what happens to them as having an internal locus of control (internals). In contrast, persons with an external locus of control (externals) tend to think that what happens to them is a function of luck, fate or powerful others. They perceive little or no connection between their own behavior and subsequent events.

Although LOC has been studied extensively, relatively few studies have been conducted in organizational settings, and the few studies have addressed behavior in individual jobs rather than in teams. Findings suggest a positive relationship between a perceived internal locus of control and a preference for responsibility, autonomy, role ambiguity, and the ability to process complex tasks with job satisfaction (Abdel-Halim, 1980; Organ & Greene, 1974; Spector, 1982, 1986).

In a review of the literature, Spector (1982) found locus of control to be an important variable for the explanation of behavior in organizations. The studies indicated that locus of control is related to motivation, effort, performance, satisfaction, compliance with authority, and supervisory style. Numerous studies have shown that internals perform better than externals in job situations that require initiative, responsibility, autonomy, and problem-solving (Abdel-Halim, 1980, Rizzo, House & Lirtzman, 1970). Organizational research suggests that personal control affects performance and greater attempts at self-management.

Locus of Control and Job Satisfaction

The general trend in research suggests a linkage between locus of control with job satisfaction and productivity. The job redesign model suggests that enriching jobs and making them more autonomous will increase performance and satisfaction (Hackman & Lawler, 1971; Hackman & Oldham, 1980). Research in work design suggests that workers experience high levels of satisfaction and productivity when their personal needs are matched with the technology for producing goods and services (Cummings & Huse, 1985).

Some studies have suggested that internals are more satisfied than externals under certain job conditions (Lee, 1990; Mitchell, Smyser, & Weed, 1975; Organ & Greene, 1974; Spector, 1982, 1986). Pryer and Distefano (1971), for example, found that nurses who were externals were less satisfied in their job than nurses with an internal locus of control, and Organ and Greene (1974) reported a significant correlation between internality and job satisfaction among scientists and engineers. Runyon (1973) studied the relationship between subordinates' locus of control, satisfaction, and different types of supervision and reported that internals were significantly more satisfied with a participative supervisory style than externals. Externals were significantly more satisfied with directive supervision than internals. The work related studies that have focused on satisfaction and locus of control, however, have been limited to individual job situations and have not measured this variable in self-managing groups.

Locus of Control and Performance-Contingent Incentives

Studies suggest that internals are more likely to respond to monetary rewards since they believe their efforts will secure the reward. Externals believe that outcomes are largely uncorrelated to their own actions, so that rewards will be beyond their control (Hollenbeck & Brief, 1987). For example, Kren (1992) investigated the role of locus of control in moderating the impact of performance-contingent incentives and participation on performance. The results based on computer-based business game indicated that locus of control moderated the performance effects of both participation and incentives. When incentives were present, internals performed better than externals. When incentives were not present, internals performed poorly compared to externals.

Self-Managing Teams

Self-managing teams evolved as a major application of socio-technical systems (STS) approach to organization redesign. The STS approach proposes to make the best match between the organization's system requirements and employees' social and psychological needs, which will result in an increase in productivity and worker satisfaction. The seminal studies in socio-technical systems theory took place in the coal mines outside of London during the late 1940s and early 1950s (Trist & Bamforth, 1951). Autonomous work teams replaced traditional supervision and individual task performance. Socio-technical designers found that autonomous work groups could develop a capacity for self-management beyond the best supervisor's powers of control. According to Van de Ven and Joyce (1981) the more the group can control its variance, the better the results and the higher the member satisfaction.

STS theorists have suggested the rationale for and effects of self-managing teams in terms of individual psychological reactions. Furthermore, it has been suggested that the underlying assumption for creating small groups (8-12 coworkers) is intrinsically motivating and enhances employee satisfaction, resulting in improved group performance and reduced labor turnover (Wall, Kemp, Jackson, & Clegg, 1986).

The focus of STS is to improve productivity and enrich workers through a job design process which integrates the employee, technology, and environment. The job characteristics model (Hackman & Oldham, 1976) has been applied to the self-managing teams concept, whereby employees perform interrelated tasks, have responsibility for a whole product or service, and make decisions about task assignments and work methods. In many such teams, the employees set production goals that support overall corporate goals. They may be responsible for support services such as maintenance, purchasing, and quality control, and may be cross trained to perform all jobs in the team. Team performance is usually rewarded or pay is based on individual knowledge and skill (Lawler, 1994). According to STS, the self-managing team design meets both the needs of a dynamic organization and the social and psychological needs of the employee. Based on the Hackman and Oldham model (1976), employees who have high social needs and high needs for growth and learning are a good match for the self-regulating team.

One of the major criticisms of STS approach is that it fails to predict clearly how individual differences may affect participation in work teams. Blood an Hulin (1967) found systematic differences between satisfied workers and dissatisfied workers in jobs structured for autonomy. Jobs that provide for greater responsibility, challenge, and autonomy may have negative effects on some workers. This was explained based on expectancy theory which states that motivation to perform is based on the belief that effort will lead to performance and that performance will lead to a valued reward. Expectancy theory suggests that work that allows workers to set goals, determine the methods for reaching these goals, and obtain meaningful feedback on their performance is more conducive to intrinsically motivated workers than to those who are extrinsically motivated (Vroom,1 960)

There is a dearth of longitudinal research tracking self-directed teams and the variables which contribute to their success or failure. In addition, although personality and job satisfaction have been studied extensively, they have not been addressed as variables which may impact the productivity of individuals in work teams. The present study investigated the effects of locus of control and performance-contingent incentives on productivity and job satisfaction in self-managing teams. Consistent with the work of Hollenbeck and Brief (1987) and Kren (1992), we hypothesized that internals having a performance incentive would outperform both externals with an incentive and internals without an incentive, and that externals with incentive would outperform externals without incentive. Expectancy theory led us to hypothesize that internals would report more job satisfaction than externals (independent of incentive), and that having an incentive would lead to greater satisfaction for both internals and externals.

Methods

Subjects. Subjects included 48 (employed, 94%) part-time graduate students and 115 government employees from three southeastern states. Subjects mean age was 40 (SD=8.98); 90 (55%) were female and 73 (45%) male, and their work experience ranged from two to 40 years (mean = 18.22, SD = 9.77). Participants' self-reported job classifications included executives (1%), managers (32%), professionals (41%), clerical (12%), and other (14%).

Procedure. All subjects completed the Nowicki-Strickland Adult Internality-Externality Scale (ANSIE: Nowicki & Strickland, 1974), and a brief demographic questionnaire. Following Nowicki and Duke (1974) persons with scores of nine or higher were considered externals (n = 72, or 44% and those scoring eight or lower were considered internals (n = 91, or 56%). Subjects were assigned randomly to all-internal or all-external teams of four, and half the teams were randomly designated to be given an incentive based on performance. Each team selected a supervisor. Teams were then introduced to the Nesting Box Game (Sterling Institute, 1972), which simulates a self-managing team responsible for planning, organizing, and coordinating production of nesting boxes, as well as for filling orders from various customers. Each team was given box patterns, "machines" (scissors and tape) and "materials" (colored paper) to produce sets. The actual production period was preceded by a 25-minute planning period used by the groups to organize, establish a basic plan of action, and to practice a full production cycle. The game covers a period of seven "days" (21 minutes total), during which teams deal with the scheduled production goals as well as with various unscheduled obstacles (e.g., equipment breakdown, rush orders). Additional stress is created by the (unscheduled) one-day absence of one team member and the (scheduled) two-day leave of another. Immediately following the game, subjects completed the Job Descriptive Index (Smith, Kendall, & Hulin, 1969), to assess their job satisfaction, while the game administrator inspected the completed and delivered boxes and recorded the group's productivity score using the game's scoring system. We used only three subscales of the JDI--with type of work, with supervisor, and with coworkers.

Results

Productivity. Mean productivity scores of the four types of teams were as follows: internals with incentive, $\bar{}$ = 83.42, SD = 42.77; internals without an incentive, $\bar{}$ = 80.33, SD = 26.25; externals with incentive, $\bar{}$ = 98.60, SD = 55.78; and externals without incentive, $\bar{}$ = 54.11, SD = 22.14. The only comparison that reached statistical significance was that of externals with incentive and externals without incentive ($F = 4.99$, $p = .039$). The unit measure for these tests was the team, not the individual.

Job Satisfaction. Data from the three JDI subscales were analyzed using multivariate analyses of variance. The multivariate F for the main effect of LOC (but not for incentive) was significant ($F = 5.71$, $p=.001$), and the univariate tests showed significant Fs for all three subscales (satisfaction with work, $F = 5.11$, $p = .03$; satisfaction with supervisor, $F = 14.81$, $p >.001$; satisfaction with coworkers, $F = 6.77$, $p = .01$). When internals with incentive and externals with incentive were compared, the main effect of LOC also reached significance ($F = 3.03$, $p =.036$), but two of the three univariate tests failed to reach significance. A significant difference was found only for satisfaction with supervisors ($F = 9.07$, $p = .004$).

Discussion

In the present study the production performance of internals with incentive did not exceed that of externals with incentive or of internals without incentive, as we had hypothesized. This result is inconsistent with research suggesting that internals assume a proactive orientation to the environment and expend effort to secure incentives (e.g., Anderson, 1977; Kren, 1992). Our finding is also inconsistent with previous research showing that internals perform better in work environments with characteristics similar to those of the self-managing teams (e.g., Abdel-Halim, 1980; Rizzo et al., 1970). Although some research has indicated that intrinsically motivated workers may not respond positively to external rewards (Lawler, 1986), and it might be assumed that internals would generally be more likely to be intrinsically motivated than externals, the relationship of these two constructs is not clear enough to provide an explanation for the present findings. An important difference between the present research and the previous research cited, however, is that previous researchers have investigated the performance of individuals while the present research used teams. A great deal of social psychological research has demonstrated that people behave differently in group situations than when alone, and our findings may represent additional evidence for that phenomenon. If so, then researchers' recommendations for application in the workplace

may need to be reconsidered if their basis was research with individuals rather than work with teams in settings more comparable with realistic work environments.

Our findings that externals with incentive significantly outperformed externals without incentive, especially when compared with the performance of internals, is also inconsistent with previous research. However, questions may be raised about measurement validity, especially for persons who score in the external direction. For example, (Davis, 1970) divided externals into "defensive" and "congruent" categories, suggesting that defensive externals may avoid competition in situations in which their status is not threatened, but become highly competitive, striving, and ambitious when placed in competitive achievement situations, that is, when their status is at risk. Rotter (1975) speculated that some persons may express external attitudes on a LOC instrument as a defense or rationalization for expected failure, but behave like internals in a competitive situation. Rotter stated that instruments more sensitive than generalized LOC scales may be necessary to predict behavior in specific situations.

One recommendation issuing from the present study, then, is that similar studies be conducted that use a multidimensional LOC instrument that has been designed for organizational settings. Some researchers have developed such instruments, but they have not been widely used. Levenson (1974), for example, developed a multidimensional LOC scale that divides the external dimension into "powerful others" and "chance" subcategories, Pareek(1992), developed a similar multidimensional instrument to measure LOC in an organizational context, using items such as "My success or failure depends on those who work with me," and "My success or failure in this organization is a matter of luck." Use of a multidimensional LOC instrument designed for and validated in an organizational environment will allow more sensitive assessment of this construct, and is likely to generate more useful results when applied in realistic contexts. We therefore recommend that researchers compare both individual and group performance in realistic settings using a multidimensional instrument. Such research may increase the external validity of findings.

It is also recommended that longitudinal studies be conducted comparing individual performance and group performance using a locus of control instrument designed for organizational research. The potential benefit of such research may increase the external validity of the findings. More consistent data may suggest practical application of results in the workplace. For example, data may be used to assist Human Resource practitioners in the design of incentive programs. This may prevent loss of dollars resulting from ill-conceived incentive programs that don't achieve their objectives. It is also suggested that employee locus of control be tested prior to placement of employees in enriched job designs such as self-managing teams. Proper placement may reduce costs usually attributed to absenteeism and turnover and may increase revenue due to higher productivity.

Self-managing groups of internals who received a performance-contingent incentive were significantly more satisfied with their supervisor than groups of externals who received an incentive. These results are consistent with findings reported by Mitchell et al., 1975 and Spector, 1982. However, there was not a significant difference in satisfaction with work and with coworkers. Some findings indicate that internals performing in responsible and challenging jobs are more satisfied with work and coworkers than externals (Organ & Greene, 1974; Spector, 1986). Self-managing groups represent a job redesign incorporating responsibility and challenge. The present research failed to support findings that internals in responsible and challenging jobs are more satisfied with work and coworkers than externals in self-managing groups. One possible explanation for the different results is that the present research examined group behavior and previous research has focused on individual work behavior. It may be that internals prefer to work independently, that is, being in control of the consequences of their own actions may be more satisfying than being part of a group and relying on the interdependence of others to achieve goals. Consequently, internals may not be very satisfied in group situations. It is recommended that this study be replicated and expanded to include qualitative feedback from internals and externals regarding their satisfaction in self-managing groups versus independent jobs.

Prior research has suggested that internals will be more satisfied in autonomous job situations where performance is rewarded (Mitchell et al., 1975; Spector, 1986). The results of the present study found no significant difference between self-managing groups of internals who received a performance-contingent incentive and self-managing groups of internals who did not receive an incentive. One possible explanation is that the satisfaction for internals comes from within and is caused by challenging work rather than an external incentive. More research is needed in this area to examine the relationship of internal locus of control and performance-contingent incentives with job satisfaction in self-managing

groups. Further study may provide clarification as to the cause of the satisfaction, that is, intrinsic motivation, the job design (group work vs independent work), and/or the incentive.

Research also suggests that externals tend to be more alienated from the work setting, less satisfied with their job, and do not respond to incentives (Organ & Greene, 1974; Spector, 1982). The present study indicated no significant difference in satisfaction between self-managing groups of externals receiving an incentive and groups of externals not receiving an incentive. This result is consistent with previous research findings.

It is recommended that future research compare the job satisfaction of employees in independent jobs and in self-managing groups using both qualitative and quantitative methods. The benefit of using a variety of research methods may result in more consistent findings in the area of locus of control and job satisfaction. Consistent findings may encourage practical application in restructuring organizations. Designing jobs that are satisfying to employees may reduce absenteeism and turnover that are costly to organizations.

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Creating Healthy Workplaces: A Model for Developing Corporate Wellness Programs

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The World Health Organization states, "A priority is to identify the possibilities for health promotion in the workplace and develop new approaches" (Kickbusch, 1989, p. 7). The results of a case study of an exemplary corporate wellness program combined with a review of literature and the researcher's experience form the basis for the following process to help human resource development practitioners create wellness programs in their workplace.

Experts believe the future of corporate health promotion is expanding due to multiplying medical costs, escalating international competition, and changing employee needs. Lovato, Green, and Stainbrook (1994) declare that the proliferation of wellness programs is inevitable. Citing increased health insurance costs to businesses, experts such as Davis-Colan (Chen, 1989b), Kizer (1987), and O'Donnell and Harris (1994) claim that reducing health problems through wellness programs rather than paying for the results of poor health makes good financial sense.

International competition is forcing American companies to refocus on critical aspects of business. As this happens, according to McGinnis (Chen, 1989a), American management will acknowledge that their most valuable resource is their employees, and that physical and mental health are prerequisites for peak performance. Evolving from this acknowledgment, worksite health promotion programs coupled with more participative management will create an optimal environment for increased productivity and enhanced quality of work life (Chen, 1989a).

People demand more out of their work today than in previous generations. Over the past several decades, sociologists and demographers have been monitoring fundamental changes in American values, especially as they relate to work. No longer is it enough for most employees to bring home a paycheck, they want work to fulfill other needs as well. As Maslow's (1968) hierarchy of needs represents, once employees' basic needs are met, their higher order needs are felt. Today's employees want to meet those higher order needs within the context of the workplace.

Yankelovich (1991) and others have called these new needs and values "expressive." Among their central aspects are the pursuit of autonomy, inner growth, self-expression, rejection of authority, and participation in decision making. Employees expect the workplace to support these values. Corporate wellness programs reflect these themes, and are a healthy way to adapt the workplace to employees' expressive needs and values (Sloan et al., 1987).

Davis-Colan predicts that in the near future worksite health promotion will become an active resource in every company's complete human resource management strategy (Chen, 1989b). As that happens, human resource managers will be called upon to create corporate wellness programs and address the policy and quality of life issues that support them.

To guide human resource professionals in creating corporate wellness programs, the following model was created. In-house wellness professionals and outside wellness consultants will both find the proposed model useful.

A Model for the Creation of a Wellness Program

The literature provides various guidelines regarding the development of successful wellness programs. Seidler (1993) suggests that notable corporate wellness programs involve the following components: needs assessment; employee interest survey; specific program goals and objectives; support of top management; corporate culture encouraging health promotion efforts; comprehensive, integrated program; respect and confidentiality; incentives for participation; easy access to the program and facilities; creative, innovative, fun; target at-risk populations; reach special populations; quality assurance mechanism; and program evaluation.

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Gebhardt and Crump (1990) report that development of successful wellness programs includes six common elements: 1) Establish written goals and objectives. 2) Assess worker needs. 3) Involve all levels and kinds of employees in planning. 4) Provide varied support internally and externally to promote the program. 5) Evaluate the program and process on an on-going basis. 6) Recruit employees for the program constantly.

Elements of success from these studies and other similar studies from the literature were combined with the results of a case study identifying the critical success components of an exemplary wellness program (Hamil, 1996), and the researcher's experience as an instructional designer to develop the following process for creation of a corporate wellness program.

Phase 1: Determine Appropriateness of a Wellness Intervention

The first phase of the model is an assessment to determine if developing a wellness program is the appropriate intervention to reach management's desired outcomes. To this end, information is obtained regarding general reasons why management wants a wellness program. Understanding the expected gains from implementing a wellness program is imperative in successfully evaluating the usefulness of a wellness program to reach those goals.

If management's goals are congruent with the types of outcomes a wellness program can provide, such as reduced health care costs, diminished stress, increased productivity, improved morale, and lower employee health risks, then the planning process can move into phase two in order to determine the organization's state of readiness for a wellness program.

If management's goals for the wellness program are not those that can be reached through health promotion activities, a wellness program should not be considered at this time. In this case, other change-promoting interventions may be suggested.

Phase 2: Assess the Organization's State of Readiness

In the second phase of the model, the organization's state of readiness to support wellness initiatives is assessed. In this analysis, management, participants and the corporate environment are studied to determine the level of support each will provide the company's overall wellness effort. It is difficult to create a healthy organization if its members are unhealthy, just as it is difficult for employees to maintain their health in an organization that behaves in unhealthy ways (Weinstein, 1989). Wellness programs require the support of management, employees, and most importantly the culture of the organization itself in order to champion healthy people and a healthy environment.

Evaluate Management Support Upper management backing and interest for health promotion is imperative in order to secure adequate funding of the wellness program initially and over time. Upper management is charged with the profitability of a company. Knowing that, the key to obtaining and maintaining upper management's support is showing the extent to which a wellness program can and does make a direct or indirect contribution to improving the bottom line.

Line management support is just as important as the approval of upper management (LaRock, 1994). Line managers directly supervise employees, and have the power to allow or disallow employees to participate in wellness activities. By upholding or creating healthful policies, line managers can remarkably increase participation in wellness activities.

Gaining line management support can be difficult because of the competing interests a line manager must balance. These people are responsible for meeting deadlines and quotas, and making sure the work meets quality standards. The way to gain their support is by showing them how productivity and quality increase when employees are allowed to participate in wellness activities.

Ascertain Employee Support Supportive management aside, employees themselves must be interested in participating in health promotion activities. The level of employee interest is determined by going directly to the employees. This can be accomplished

most effectively through an employee opinion survey or focus groups. (Surveys and focus groups determine the level of support for a wellness program, and can include more specific information on the types of programming in which employees would participate if a wellness program is adopted. Including information on specific employee interests is more time-consuming up-front, but will save surveying employees again later if the wellness program goes forward.) If employee are uninterested, educational programs can be offered to increase awareness of the benefits of being well. Wellness programs should not be mandated; therefore, employee interest is key to the success of a wellness program.

Appraise Corporate Environment Support An accurate assessment of the corporate environment is crucial in evaluating whether or not a company is ready to institute a wellness program. Preparing to create a healthy workplace requires assuming a systems approach: acknowledging that each worker is part of an open, dynamic system, affected by and acting upon internal and external environments (Weinstein, 1989). A corporate environment is influenced heavily by three factors: its policies, physical setting, and corporate culture. These three areas must support wellness activities in order to reap the benefits of health promotion efforts.

An assessment is made of the health enhancing policies the company has or does not have. A no-smoking policy supports efforts made by a wellness program. A flex-time policy boosts wellness program participation and empowers workers. Alcohol usage at company functions sends a signal that the company's environment condones unhealthy behaviors.

Along with a corporation's policies, its physical setting influences the work environment. Assessing how the physical setting supports a healthy workplace is an important part of determining how strongly health promotion activities will be supported by the organization. Positive indicators of a supportive physical setting include healthful foods sold in the cafeteria and vending machines; ergonomically engineered office desks and chairs; the absence of ashtrays and cigarette machines; clean, brightly-lit, and well-maintained work areas; and an effective safety program.

Corporate policies and physical environment help shape the nebulous concept of corporate culture. Corporate culture is comprised of the social systems and environments that exist within a company including at least five important concepts: 1) values--heartfelt beliefs about the appropriate way to approach living; 2) cultural norms--expected and accepted behaviors; 3) peer support; 4) organizational support--the systems and structures of an organization manifested through formal policies and informal activities; and 5) organizational climate--an organizational culture's capacity to bring about constructive change (Allen & Bellingham, 1994).

For the wellness philosophy to flourish, promoting the establishment of social systems and environments conducive to health-promoting behaviors is essential (Brehm, 1993). Among the most powerful of cultural influences affecting wellness are: modeling, reward systems, orientation, training, rites and rituals, and patterns of relationship development (Allen, 1993).

The Lifegain Health Culture Audit can be used to assess the underlying workplace culture. It is a tool for identifying those aspects of the culture which fail to support people's efforts to live healthy lifestyles. The Lifegain Health Culture Audit provides baseline data from which areas for change in the organization's culture can be identified and later measured to determine progress.

In assessing the corporate culture, the job itself cannot be ignored. Weinstein (1989) believes employers must pay more attention to the nature and structure of the work experience itself as part of a holistic wellness package. An assessment of the work experience includes studying three key variables: 1) The way the company is structured: Companies with flat structures support wellness activities better than vertical, bureaucratic structures. 2) Job design: Employees empowered to make decisions about their work are more inclined to healthy behaviors. 3) Expectations of good performance: Climates that reward people for consistent, excessive overtime, for example, are not supportive of healthy lifestyles.

Once an analysis of a company's policies, physical setting, and corporate culture is complete, results are objectively scrutinized to determine the level of support the corporate environment will provide a wellness program. If support in one or more of these areas is lacking, efforts should be made to increase these necessary support mechanisms before continuing to plan the wellness program. If support in these areas is impossible to obtain, a wellness program

should not be considered. When the corporate environment is supportive of wellness efforts, a health promotion program can then be designed.

Phase 3: Design the Program

The first and most important element in designing a successful wellness program is to determine a health promotion mission and vision, and set out specific wellness program goals and objectives.

The mission statement outlines the importance of the wellness program and what the program is to accomplish in the short term. The vision statement describes the long-term success of the wellness program. Most companies want to improve the health, well-being, endurance and productivity of employees, their dependents, and retirees. They also want to reduce costs associated with workers' compensation, disability claims, medical insurance, and absenteeism. Improved morale and company image are also commonly desired outcomes. Mission and vision statements will most likely revolve around these issues.

A written set of goals and objectives provides a specific sense of direction for program activities. In goal-setting, three types of objectives are usually established: 1) Performance goals deal with financial outcomes and changes in health behaviors. 2) Programmatic goals include workshop attendance, self-help material distribution levels, task-force participation, and other indicators of program success. 3) Cultural goals are created to make the corporate environment more conducive to wellness, and include development of specific health promotion values, norms, and peer support (Allen and Bellingham, 1994).

To create a mission, vision, and goals for a wellness program, a primary source of information is management's overall expectations of the program determined in phase one. Based on those expectations, an assessment of specific company needs is undertaken. This assessment includes an evaluation of external factors including competition, community, and national influences, as well as internal factors such as safety issues and insurance claims paid by the company. Areas of high cost to the company are targeted to achieve maximum savings early in the program's existence. Also necessary in establishing wellness program goals is an assessment of employee needs and interests, and information on available internal and community resources.

Following an assessment of the company, the employees' needs and interests are determined. Workers' health status is measured by a Health Risk Assessment (HRA) to identify dominant health problems in the employee population. HRA refers to "the initial or periodic determination of an individual's physical, mental, and/or emotional health status at a given point in time" (Heim, 1994, p. 219). HRAs can be as simple as screenings to determine blood cholesterol levels or as complex as comprehensive physical examinations at a doctor's office. The level at which a HRA is undertaken depends upon the type of information needed to focus wellness program development.

Along with their health needs, employee interests are determined. If employees were not surveyed regarding their specific wellness program interests during phase two, such an inquiry is completed at this point. All employees should be represented in the results of this effort.

The more a wellness program functions interdependently within the systems already created inside an organization, the fewer wellness program components will have to be created from the ground up, and the more ingrained wellness will become in the structure of the organization. Structural links between the wellness program and other health-related organizational functions are critical. It is important that a wellness program's goals be developed such that they are congruent with those of other corporate health-related initiatives. Developing a wellness program without reference to other health programs can result in duplication and/or inconsistency of effort. Long range plans that concurrently consider occupational health services and wellness programs should be developed (Seidler, 1993).

Links to the community can be especially important in maximizing a wellness program budget while still maintaining a commitment to high quality. Community resources such as Weight Watchers, hospitals, local health clubs, and community colleges can provide quality wellness services at low or no cost. Corporate wellness program goals should include mutually

beneficial interactions with the community. Once management objectives, organizational needs, employee needs and interests, and internal and external links are clear, a vision, mission, and set of specific short-term goals for the wellness program are articulated.

Plan the Wellness Program The vision, mission, and goals are the basis of a specific plan for creating the wellness program. A detailed and comprehensive plan includes the following actions: 1) Decide what programs will be offered. 2) Establish where programs will take place. 3) Plan who will run the wellness program and individual program initiatives. 4) Establish the policies and procedures under which the wellness program will operate. 5) Define how and when the program will be evaluated. Each of these decision-points is addressed below.

Decide What Programs will be Offered To begin planning a wellness program, determine what educational, exercise, recreational, family, health-assessment, and social opportunities will be offered on an on-going basis. Three major programming decisions center on 1) the desired level of impact of the program, 2) the desired intensity of the program, and 3) the topics covered by the program (O'Donnell, 1994).

The level of impact should be determined by the organizational goals the employer is trying to achieve as a result of the program. The most effective wellness programs offer employees the chance to improve their health and well-being through 1) awareness strategies which help employees recognize their need to change behaviors, 2) lifestyle change interventions that help employees change the behaviors they have identified; and 3) supportive environment programs which create favorable environments for change. Generally the greatest behavioral impact is made by lifestyle change and supportive environment programs, but awareness strategies are vital in creating a felt need to change. A mix of the three program-types based on the objectives of the wellness program is recommended.

Strong impact can also be made by targeting programs to at-risk populations--the 10 percent of employees who are responsible for 70 percent of medical care costs. Programming for this group has the potential to reduce medical care costs dramatically.

The level of intensity of the program is determined by the degree of success desired in program goals, the level of intensity needed to achieve success, and the health conditions and practices of participating employees. Level of intensity is compounded by increasing the quantity of resources invested, upping staff levels provided, and lengthening time spent by participants in a program. Increased intensity of a wellness program generally translates into increased success in meeting objectives.

Program topics will reflect the results of the goal setting process, and resonate a holistic attitude toward wellness. Plan to present topics in a combination of formats, including self management materials, classroom education, physical fitness training, and health screenings/assessments.

Establish Where Programs will Take Place Physical facility needs become apparent when the wellness curriculum has been decided. Research shows that participation is greater when a wellness facility is located at the place of employment rather than at an off-site facility. However, the benefits of increased participation must be weighed against the costs of building, renting or remodeling space at the worksite and the costs of maintaining a facility over time. Companies making a serious, long-term commitment to improve the health of their employees should provide on-site facilities if at all financially feasible.

Plan Who will Run the Wellness Program and Individual Program Initiatives Staffing decisions stem from the goals of the wellness program and the specific programs being offered. In general, health promotion professionals should run the wellness program. Ideally, these individuals have expertise in all of the following areas: organization theory; group process; operations management; communication and marketing methods; motivation techniques; design process; and clinical aspects of health promotion including health assessment, fitness, nutrition, stress management, smoking cessation, medical self-care, and social health (O'Donnell, 1994).

Another important consideration in staffing the wellness center is choosing people who embody a wellness lifestyle. One of the most powerful concepts in changing peoples' behavior involves modeling. If staff members consistently advocate positive health through their actions

and words, good health becomes a natural part of the environment (Anspaugh, Ezell, & Godman, 1983; Schaller, 1981).

Establish the Policies and Procedures Under Which the Wellness Program will Operate Procedures for operating the program are outlined during the planning process. Plans are devised to address procedures such as scheduling workshops, classes and events; promoting wellness and wellness activities; maintaining facilities; budgeting; registering and tracking participants; and managing equipment.

Policies guiding the operation of the program are also established at this time. Decisions are made regarding fees, hours of operation, participant code of conduct, confidentiality, and rules and regulations regarding use of facilities and equipment. Eligibility requirements and incentives to participation will also be decided.

The size of the wellness program and the method for selecting employees for the program is determined during the planning process. The program can be made available to all employees or only to selected employees. It can be offered to spouses, children, and significant others. Research shows that wellness program effectiveness compounds when all employees, retirees, and their families are all allowed to use the wellness program. Chenoweth (1995) states that programs must be directed to dependents, and retirees as well as employees, considering that dependents and retirees often consume twice as many health care dollars than employees.

Inclusionary policies not only save money, they also enhance the effectiveness of the wellness program. Lifestyle change, one of the most important goals of all wellness programs, requires the support of work groups and families. Including all employees and their families in wellness efforts helps them support each other through change. Maintaining positive lifestyle choices and fostering a wellness approach to living can only be achieved when there is support and encouragement by the surrounding environments (Weinstein, 1989; Powers, 1994).

When employees are provided incentives to take part in a wellness program, participation increases and with it, positive results of the program. Offering employees time during the workday to participate in wellness activities is an important incentive to participation. This can be accomplished by offering a flex time policy which allows employees control over their arrival, departure, and lunch times throughout the day to best accommodate wellness program participation. Another incentive to participation is to offer employees the opportunity to take part in wellness activities on company time.

Another incentive to participation in wellness activities is offering employees a rebate on insurance costs for good health. Such programs reduce an employee's cost for health insurance if agreed upon health goals are met and maintained. The benefits and costs of these incentives are weighed by the organization to determine whether or not they will be instituted.

Define How and When the Program will be Evaluated The evaluation plan is specified during the design phase. Decisions are made regarding what aspects of the program to evaluate, when to evaluate, how, by whom, and for what purpose. In making these decisions it is important to take into consideration that meaningful behavior changes can occur within six months of program initiation, but changes in health status lag behind considerably. Health outcomes may not be measurable for at least one to two years after program initiation. Evaluation is based on the wellness program goals determined in phase one, and includes process evaluation, impact evaluation, and outcome evaluation. Process evaluation assesses the process of the program; impact evaluation assesses the immediate effect on behaviors; and outcome evaluation assesses impact on quality of life and health status (Green and Kreuter, 1991).

Phase 4: Obtain Management Approval and Funding

Phase four of the model involves approaching management for approval and funding of the project. Along with the design plan, a budget for development and maintenance of the program (including insurance costs), and a cost/benefit analysis are submitted to management sponsoring the program. (If the cost/benefit analysis shows total benefits do not exceed total costs, the program as it is

planned is not a worthwhile investment, and the program design needs to be revised before submission to management.)

In presenting the proposal to management, the health promotion program is marketed as a long-term investment that will benefit the organization, not as an extravagant benefit for employees that can be cut when money is short. The ultimate goal of corporate health promotion programs is to make the organization better able to achieve its strategic goals is emphasized.

Phase 5: Implement the Plan

Once the design phase is complete and management has approved the budget, the plan can be implemented. In the implementation phase, all the plans developed in the design phase are carried out. This includes building, remodeling or renting a physical facility; developing creative, innovative, and fun educational and exercise programs and events, and creating self-management and reference materials. Hiring and preparing the staff is among the first and most important functions in implementing the plan.

Hiring and organizing people who will evolve into a strong health promotion team provides the leadership necessary for successful programming. During the staffing function, recruit and hire qualified job candidates, provide orientations to new employees, identify internal employees and arrange for them to join the wellness staff on a full- or part-time basis, train the staff in skills needed to achieve program goals, tailor employee's roles and responsibilities around program goals, and establish communication channels to enhance interpersonal and interdepartmental communication and teamwork (Chenoweth, 1995).

Phase 6: Conduct the Program

This phase marks the beginning of employees' participation in wellness activities. At this time plans made in the design phase are carried out: Educational and exercise programs are conducted, policies and procedures are enacted, self-study materials are made available, and events are mounted.

Actions to carry out, monitor, and maintain these activities are undertaken. These include promoting wellness activities to achieve increased participation, managing efficient systems for program operation and administration, maintaining the facility and equipment, monitoring the budget, continuing to develop the wellness staff through training and multi-dimensional roles, planning and staging special events, evaluating and revising individual classes and workshops, guaranteeing a high level of program quality, and providing regular information reports on health status and practices of each department.

Phase 7: Evaluate, Update, and Revise the Program

After the period of time specified during planning, the wellness program's effectiveness at meeting its stated goals and objectives are evaluated. Follow the decisions made during the planning process regarding the aspects of the program to be evaluated, how they are to be evaluated, by whom, and for what purpose.

Assess the results of the evaluation to determine strengths and weaknesses of the program. Establish the root causes of successes and failures of the various aspects of the program. Apply the program's success factors to improve weak areas of the program. Address ideas, and initiate plans to revise or replace failing programs. Every two years, the entire model will again be used to re-examine the wellness program to ensure that it keeps up with the changing needs of the company and employees.

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Inside the Heads of HRD Practitioners: How Do They Plan?

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This study examines the planning practices of five experienced HRD practitioners using qualitative research methods. Results indicate that subjects had similar mental models of the planning process, describing it as highly iterative and paradoxical. Common practices used to enhance planning are discussed as well as the influence of subjects' values and beliefs on their planning. The paper also explores implications for education, practice, and further research.

What do we know about the planning processes of HRD practitioners? How do HRD practitioners plan their interventions? What factors influence their planning? How do HRD practitioners' beliefs and theories of practice affect their planning processes? What could be the benefit of exploring answers to these questions?

This paper will discuss research that was conducted on the planning practices of HRD practitioners. Planning was selected as the focus of this study because it is a common practice across all HRD interventions. HRD professionals engage in planning activities whether they are internal or external and when they are designing training, facilitating groups, conducting a visioning meeting, resolving a conflict between individuals, or developing and implementing an HRD strategy in the organization. The purpose of this research is to look at the planning practices of HRD professionals independent of a particular HRD model or approach. The rationale is that the broader construct may help in the identification of similarities across the various types of HRD interventions. This information could be useful to other practitioners, researchers, theorists, and HRD educators.

Theoretical Framework

The theoretical framework from this research comes from several areas of study, including instructional systems design (ISD), human performance technology, and teacher planning. Research and study in ISD is resulting in new models as well as descriptions of what designers actually do in practice. Performance technology suggests different approaches to improving organizational effectiveness, which might require different planning strategies. A substantial amount of research has been conducted on teachers' planning practices which provides information that can be very useful to HRD researchers and practitioners. The intent of this study is to integrate learnings from several fields and add to the knowledge base on how HRD practitioners plan for their interventions

Instructional Design We are reexamining instructional design (ID) fundamentals and exploring alternative models influenced by constructivism, situated cognition, cognitive learning theory, general systems theory, chaos theory, performance technology, total quality management, and new technology (Jonassen, 1990; Richey, 1995; Seels, 1995; Tessmer & Wedman, 1995; Wedman and Tessmer, 1993; You, 1993). One change is that new ID models are describing the design process as less linear and more holistic, with tasks combined, repeated, or overlapped (Davies, 1995; Richey, 1995; Tennyson, 1995).

Recently, several studies have been conducted to identify what instructional designers actually do in practice. Pieters and Bergman (1995) found that designers used an integrated design

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process, with fluid boundaries between phases and activities within phases. Designers also indicated that preceding activities are frequently revisited during an iterative process. Wedman and Tessmer (1993) developed a Layers of Necessity Model after finding that designers frequently omit a variety of ID activities from their projects. Winer and Vazquez-Abad (1995) used this model in their study and confirmed previous findings that designers do not systematically perform all the steps in any ID model.

Rowland (1992) in his study of what instructional designers actually do, found that expert designers appeared to interpret and treat problems as ill-defined, used iterative design processes, and created knowledge-building cycles leading to problem-solving schemes. Perez & Emery (1995) studied differences in the thinking of expert and novice instructional designers given the same design task. One key finding was that experts spent considerably more time exploring the problem than novices. Experts *interpreted* the design problem - novices *identified* the problem. In addition, experts selected a design strategy before working out all the details of each phase of the design. Experts integrated, reiterated, and cycled through the design process, while novices exhibited a straightforward, step-by-step approach.

Performance Technology While many professionals have focused their studies on instructional systems design, others have taken a broader view, with ISD positioned as a subset of the larger field of performance technology. Performance technologists take a more systemic view of improving individual and organizational performance, looking carefully at the situation and identifying the cause(s) of the problem as a means of determining the appropriate solution(s) (Stolovitch & Keeps, 1992). As with ISD, this field is searching for new performance improvement models that can guide HRD professionals in the turbulent workplace environment (Rothwell, 1994). Robinson & Robinson (1995) have recently proposed a conceptual framework to help trainers move from traditional roles to that of performance consultant, which involves developing partnerships with management, identifying the performance required to meet business goals, working with management to do whatever is needed to enhance performance, and transitioning from a focus on training delivery to a focus on performance improvement.

Teacher Planning Extensive research has been conducted on the planning practices of teachers. Although there are differences between designing classroom instruction in a school system and designing interventions to help improve the effectiveness of organizations, there are similarities as well.

Numerous studies on teacher planning have revealed the teachers do not follow a rational, objectives-first planning model but begin by selecting or designing instructional activities (Brown, 1988; Clark & Lampert, 1986; Clark & Peterson, 1986; Yinger, 1980) or focusing on content (Zahorik, 1975). From the findings of his naturalistic research, Yinger (1980) developed a teacher planning model that is cyclical rather than linear. In addition, he proposes that each planning event can be influenced by prior planning and teaching experiences, and that, potentially, each teaching event feeds into future planning and teaching processes.

Elbaz (1981), in research on teachers' use of practical knowledge, describes how teachers hold and use their knowledge in distinctive ways; the results illustrate how teacher's knowledge is dynamic, held in an active relationship to practice and is used to give shape to practice. McCutcheon (1995) conducted similar research on how practical theories of action guide the decision-making processes of teachers, describing how teachers employ their practical theories to help them decide what to teach, how to motivate students, present ideas, and otherwise orchestrate lessons.

Although there are differences between the context in which teachers plan their lessons and HRD professionals plan their interventions, some of the findings and methods from teacher planning research can help inform work done by HRD professionals. Teacher planning research has attempted to bridge the gap between theory and practice, to identify what teachers actually do when they plan for their instruction. Instructional design research has explored the difference between theory and practice as well. This study focuses on the planning practices of HRD professionals, those who may be designing interventions in the training, career development, or organization development domains.

Research Questions

The general research questions explored by this study are:

1. What are planning processes of human resource development practitioners?
2. How are their planning processes influenced by their theories and beliefs?

The purpose of the research is to identify and describe these processes and relationships so that this information can be shared with others. The actions of HRD professionals are substantially influenced and even determined by their cognitive processes and their underlying theories and beliefs. By describing the mental lives of these professionals, this research attempts to increase our understanding of how and why the human resource development process looks and works as it does. This research will result in a portrayal or a model of cognitive processes of HRD planning that can be used by other practitioners, researchers, theorists, and HRD educators.

Methodology

A qualitative approach was used in this research because it is sensitive to the nature of the research focus, which involves describing the thinking processes as well as the underlying beliefs of HRD practitioners.

Sample The subjects of this research are five HRD practitioners who have substantial experience in designing and implementing training and organizational development interventions. All five have a masters degree in HRD or a related field. They have diverse experience in the types of organizations served (public, private, non-profit), types of interventions used (process consultation, group facilitation, training) and relationships with the clients (internal and external).

Data Collection A combination of qualitative methods was used in this study, including: formal and informal interviews (recorded on audiotape), the audio-recording of actual planning sessions, reporting on planning activities (audio-recorded), journal keeping, written documents or notes, cognitive/mind mapping, and model-building. The researcher worked with the subjects individually to establish the length and scope of the period under study as well as the use of the various research methods. Subjects D and E were business partners; some of their data collection occurred individually and other occurred jointly.

In general, the first round of data collection involved the subjects providing the researcher with basic information about their planning processes. These took the form of audio-recordings sent to the researcher or meetings between the subject and researcher which were audio-recorded. The time-frame for the first round of data collection averaged three to four months. The second round of data collection involved a two-hour audio-recorded meeting with each subject, where structured interview questions were discussed, where the subjects described an illustration they had created of their planning process, and where the subjects developed a model, or cognitive/mind map of their planning construct/process by arranging cards on which key words were written. The third phase involved the subjects responding to ideas, themes, hypotheses, etc., developed by the researcher and providing validation and clarification.

Data Analysis Data from this research were analyzed simultaneously and sequentially. From the data, patterns of thought and behavior were identified. These patterns were the foundation from which hypotheses were formed concerning the planning processes of HRD practitioners. These hypotheses were evaluated, revised, and refined through subsequent data collection.

Results

There were many common themes. The subjects had similar mental models of the planning process, they used comparable techniques to enhance the planning process, and they all discussed

how their actions were strongly influenced by their fundamental values, beliefs, and theories of practice.

Mental Models. The three key elements of the subjects' mental models of planning, although described in various terms, included discerning the desired outcomes, understanding the current situation, and designing a process to meet the needs. Subject B defined planning as "identifying the desired/hoped for outcomes and designing a set of actions and plans to get from present to the desired end." Subject A described the planning model as "...starting out with what we want to accomplish, where we are now, where do we want to be, and what do we have to do to get there." All of the subjects highlighted the collaborative nature of the planning process as well. For example, Subject C described "joint planning with the client (group) to determine what outcomes are desired, what has been tried before, and what barriers can be identified which could limit success. We co-develop purpose and expected outcomes."

Iterative Relationship Between Elements. The subjects described a strong iterative relationship between the elements in the planning model; Subject B used the word *organic.* According to Subject A, "It's all iterative, connected to generating solutions and developing solutions and strategizing approaches for implementation... I can't say that I sit down, when I'm planning anything, that I do steps one, two, three, four. Generally those are the steps: you want to know what your goal is and your rationale for wanting to achieve that goal, what's happening today, what's the difference, and how do you get from where you are to where you want to be. That's the general framework, but what happens in between is very iterative, it's envisioning different scenarios, and you talk to people and it changes, and all these things happen so on the surface it appears to be very chaotic but I think there is a system to it and that's why I like to think in system terms with whatever I'm working on."

The subjects described the process as ongoing; as information is obtained, it can help shape other elements. For example, Subject E explained that developing alternatives is a way of understanding the problem. Subject B discussed how work done on analyzing the present situation "further clarifies the outcomes or the desired scenario... Often I find myself redesigning, depending on what further information I get and what happens. It's design and redesign."

Paradoxical Nature of the Process. Subject B described a paradox in the planning process. "Chaotic and rational, it's both rational and chaotic. There's a tension." Subject A explained, "On the surface it looks very chaotic and I think the key is finding the patterns, the systems that can emerge from that. I'm not saying that we become so systematic that we're stifling growth and creativity, so you want to stay chaotic and still have some systematic approach to it."

Subject E concurred, "I think it's very rational, I mean I think what we're doing is a series of testing out hypotheses and theories, but it's not rational in a very linear sort of way." Subject D added, "I think that even though it's rational, it's also chaotic," to which Subject E responded, "And I'm trying to think, does it look chaotic or is it truly chaotic?" Subject D continued, "I don't know but I'd almost connect chaotic with holistic and that's where the chaos comes in; there are all of these thoughts and that's where it's part of the whole picture."

Enhancing the Planning Process. Many techniques were used to enhance the planning process including doing research, talking to others, journaling, reflecting on past experiences, and visualization. In addition to these, subjects explained, often through metaphors, how they drew upon their subconscious for insights and ideas. This phase came after obtaining information about the desired outcome and the present situation and tapping into resources for potential solutions.

Subject C called this process *letting it all stew in a slow boil*, explaining, "It's not a physical knock on the intuition but it just seems to happen for me. Once I let this rest and just sit there and bubble and stuff, then I might wake up two, ten days later or I might be driving down the street and I'll say, wow, oh boy, that's what I need and so it's either night dreaming or day dreaming that gives me a vision or a picture... It's sort of like I said, 'That would be nice to have,' and when I talk like that it's almost like telling my subconscious to send me something, so that's what this knock on the door (on intuition) is, but it's like I put things on hold and have this expectation that it's going to come to me sooner or later. I might wake up in the middle of

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the night or I might be driving down the road or I might just be sitting and having a conversation or daydreaming, not paying attention to someone, but typically that's where I get my best ideas."

Subject B also used a pot-like metaphor to describe the creative process. "Well, probably ideas come to me in the *percolation* process and in the journaling that I do. I often will journal in the preparation or in the past, if I have a three-day event and something breaks down in day one then I'm saying I need to do something different in day two. Now where's that idea going to come from? Well, it comes best when I take time that evening that first day to journal and read. So I'll pull out a book and then I'll journal and then often I'll run - I will usually walk or run and get some exercise every night if I can while I'm working and usually at some point the idea will come at least to test or try. The other source are dreams. I've literally had dreams where I woke up and if I had the time to analyze it or write it down, say aha, that's what's going on or that helps me out for what I want to suggest today or what I want to do today."

Independent of the others, Subject E also developed a pot-related metaphor to describe the creative part of the planning process, explaining, " The first thing that is important when we're going through a beginning stage of a process is to assess the client's felt needs - what they're telling us they need, versus what we think we're hearing under those words and all that. We're creating sort of the form of the intervention, so is it a training thing, or is it something where we need to do a lot more assessment before we can see the ultimate form. It's like we were *throwing ideas into the pot*, so there's D's and E's sum knowledge, experience, creative flashes, new client data, sort of keeping that all going, stirring it up. It's almost like dropping pebbles into this which I call the design potential. And we do it in weird ways, so eventually either enough pebbles get into this or this big flash just happens and then that flows and the substance of the intervention begins to fill this up until we finally get the whole intervention."

After arranging cards in a manner to illustrate their planning process, Subject D explained, "You know it's interesting as I look at this I understand why we get stressed. Because when we aren't allowed the time to do this (iterating, reflecting, collaborating, designing, making decisions) it makes me stressed." Subject E added, "Well, there's that and when we have multiple things we're doing it for. That's when it's maximum stress for me because this beginning phase is very loose and you forget what bucket you're dropping the pebbles in. I think we're at risk for putting or using a pebble in two buckets it doesn't really belong in because we just dropped it here and so maybe it also clicks it there but we haven't done enough of this other stuff (iterating, reflecting, collaborating, making decisions)."

How Values, Beliefs, and Principles of Practice Influence the Planning Process. In their explanations about their planning and consulting practices, the subjects continuously referenced their underlying values, beliefs, and principles of practice. Some common beliefs, although not stated exactly in these terms, were the value of working collaboratively with the client and building ownership, the significance of process, and the importance of learning, growth and development in the intervention.

Collaboration and Ownership. Collaboration and ownership were often described in relation to each other. For example, Subject B explained, "My role, and this also has to do with one of my core values, has to do with providing design alternatives, so in doing that I'm always striving to get the client to choose from alternatives. It has the benefit of two things. One, to see if they're serious about this, that they would be willing to do the work to choose, and two, once they choose, even though it's my design, it's their design. It goes back to the ownership thing. I'm at my best when I can truly collaborate in designing something and the tricky part of that is with the client, but the more that I can do that, the better I feel and the more I get back to the ownership thing."

Process. Subjects described the importance of process, which plays out in the planning and implementation of interventions. Subject D stated, in reference to teambuilding interventions, "We realize that what we do is less important sometimes. We want to make sure that what we designed doesn't get in the way of the process. Subject E added, "There needs to be enough of a process there that they're not questioning or rebelling or sort of pulling back but they can stay engaged and have meaningful discussions - but they could have probably gone about doing that

ten different ways."

Subject B explained, "I guess one of the four biggies, as far as fundamental assumptions that I work out of is that process is more important than the product. Because as I look at this I say, what about the product? Is that important to me? Probably less so in the sense that when I think about the products that tend to get generated with the stuff I do, the products tend to be less significant to the development of the organization than the process. The mission statement is put on the shelf and never looked at again. The strategic plan gets put on the shelf... The result for me is ownership and commitment, sense of collaboration, sense of freedom. These are results, outcomes, as important to me as the product, the mission statement or three decisions on an issue."

Learning, Growth, Development. All subjects discussed the importance of learning, growth, and development in their interventions, however, the implementation took various forms. In some cases the plans were very explicit, as in training interventions. In some instances the teaching or coaching was more implicit or even covert. Subject B explained, "If I'm doing work with a group doing strategic planning or even group decision-making processes, facilitating those, a part of what I try to do is sneak in or very formally if they allow, training about some of the processes that we're going to use."

Subject C said, "They may be getting some of this teambuilding training, this 18-24 hour training and not know it. They know that these two hours every other week are focused on their skills and behaviors whereas this other is covert, almost subversive on my part. I'm simply facilitating on the spot and helping them remember what I did... So I try to be very Socratic and to fold back in the learning. Every chance I get, I fold back in and reinforce the learning."

Subject A, who is internal, explained, "A lot of my work revolves around helping people learn how to learn... So I guess another one of the planning - nitty gritty planning things that I do - not only learning how to learn but helping the organization become a learning network where there's sharing of best practices and learning from one another and not reinventing the wheel with 42 different locations... So it's kind of a spoon feeding, water dropping kind of approach; give them a little bit here and there to get them moving in that direction without saying that's what we're doing."

Discussion

The planning practices of HRD practitioners examined in this study bear similarities to research, theories, and models being developed in the areas of instructional design, teacher planning, and performance technology. The subjects' mental models of the planning process, iterative, chaotic, and organic as well as rational and somewhat systematic, are consistent with the research on instructional design practices which indicates that the process is more holistic than linear. Also, the results support Rowland's (1992) and Perez and Emery's (1995) findings that expert designers treat problems as ill-defined and create knowledge-building cycles which lead to problem-solving strategies. Parallels to research on teacher planning were found as well. The HRD practitioners in this study used a cyclical problem solving approach to designing their interventions and illustrated how their values, beliefs and practical theories of action shaped their practice. The subjects took a broad view of their potential solutions to the problem and spent considerable energy trying to understand and clarify the situation and the desired outcomes. This is consistent with performance technology models which outline a systemic approach to improving individual and organizational effectiveness. The collaborative nature of the process, as described by the subjects, was congruous with the performance consultant role described by Robinson and Robinson (1995).

There are a number of limitations to this study. It involved only five subjects and included a substantial amount of self-report data. Other studies should be conducted with a greater number of subjects and include more data from actual planning sessions, either case studies or real. These limitations acknowledged, the results provide a view of the planning process that offers some new perspectives. These include the role of the HRD practitioner in integrating all

of the elements of the problem-solving process and techniques used to maximize the creative, intuitive part of the process.

As a result of this study, a new planning model for HRD practitioners is envisioned. It looks like a three dimensional molecular model, with all of the pieces interconnected, suspended in the client system of the organization. The center is the knowledge, experience, resources, values, and principles of practice of the HRD practitioner. The other parts of the model are: discerning the desired outcome, understanding the current situation, and exploring potential solutions. A model in this format shows the inter-relationships of the elements, the iterative nature of the process, and the immersion in the client system.

To illustrate the creative process, beams of light move around within this molecular model, sometimes moving quickly, sometimes slowly. These beams illustrate how information and thoughts affect other parts of the model as well as the importance of having time for these ideas to percolate, boil, or bounce around. These beams of light will eventually either stop or explode in a bright flash, indicating that the preliminary form of a process or intervention has been shaped. That preliminary form will be modified and adapted as more information is obtained and as the design is worked in more detail. This ongoing design process of filling in the form with the substance of the design continues throughout the intervention.

Implications

Implications can be drawn from this study for education, practice, and research. Practitioners could better comprehend their own decision-making processes by surfacing and articulating their values, beliefs, and theories of practice. This would include developing their own model of their planning process, making it explicit so that it could be understood and refined. Novices could be provided opportunities to study the planning practices of others and shown how values, beliefs, and theories of practice influence the process. They could also be provided experience in planning or designing interventions in case study or real-life situations with the guidance of an experienced practitioner who can explain the thought processes behind the decisions. Novices could be encouraged to develop their own model of the planning process as they observe others and gain personal experience. In addition, novices as well as experienced practitioners should have a heightened awareness of the iterative nature of the planning process and the importance of allowing time for the iterations and intuition to be maximized.

This was a very preliminary study on the planning practices of five experienced HRD professionals. Further research is warranted on the differences between experts and novices in their planning as well as on the iterative nature of the process. How does that iterative process work? What factors influence it? Are there any patterns? This research also calls for additional study around techniques to enhance the creative nature of the process. What makes one technique more effective than another? What is the optimal time or workload for the intuitive process? What are the consequences of planning in a less than optimal situation? Finally, more study, theory or model building would be helpful in distinguishing between and/or integrating the components of HRD (training, career development, organization development). What are the similarities and/or differences in the approaches, processes, and outcomes of these types of interventions? What are the implications for planning and design? Is it important that HRD practitioners be experienced in all three areas in order to accurately determine needs and solutions?

This research raised more questions than it answered. In studying the planning practices of HRD practitioners, parallels were found between current theory and research in the areas of instructional design, performance technology, and teacher planning. This study highlighted the important role of the HRD practitioner in integrating information to enhance organizational effectiveness and the influence of their values, beliefs, and theories of practice. Furthermore, it illustrated the importance of maximizing the creative, intuitive part of the planning practice and of allowing time for the iterative nature of the process to work.

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Instructional Thoughts of HRD Practitioners

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This study examined the thoughts of a sample of HRD practitioners, seeking to determine the extent they were congruent with mainstream educational conceptions of teaching and learning. Findings revealed that the instructional thoughts of the practitioners were mediated by concerns for organizational productivity. Both humanistic and coporatist values informed their beliefs.

Instruction lies at the heart of the HRD function. In many senses, trainers have a task no different from classroom teachers, or college professors. They must teach subject matter knowledge, processes and procedures, while striving to enhance the knowledge, skills and attitudes of their trainees. Despite the fact that training substantially means teaching, the field of HRD pays substantially less attention to the professional preparation of trainers than does the field of teaching for its practitioners. Indeed, there is no agreement on what constitutes the minimum professional preparation that a trainer must have undergone as a prerequisite for practice. Entry into the profession is unregulated.

Another observation one can make with respect to differences between the professions of teaching and training is in the nature of their respective discourses. These discourses are shaped by the circumstances of the two groups. Trainers are hired to improve the productivity of workers--teachers are hired to prepare students for citizenship. These are very different briefs. Teachers have a far off horizon. Trainers have more immediate obligations.

There does exist a discourse on instruction within the context of training, but the mechanisms for connecting thought with practice are not as well formed as in teaching. Part of the reason for this is that trainers often concede to not being subject matter specialists. They are prepared to forfeit such claims. Thus, domain specific discourse on instruction is absent. There is no counterpart to discourses related to the teaching of reading, math, or science.

Problem:

The problem of this study was that little is known about the instructional thoughts of trainers. The basic instructional culture of HRD has been little examined.

Purpose

The purpose of the study was to seek understanding of what where the strong instructional preferences of HRD practitioners and whether these tended toward mainstream conceptions of teaching and learning, or whether they appeared to be peculiar to trainers, conditioned by their work circumstances.

Research questions

Research questions set forth for this study included the following:
a. Are the instructional preferences and values of HRD practitioners consistent with mainstream educational theory?
b. In what ways are the instructional thoughts and preferences unique or peculiar, given what we know about teaching and learning?

Literature review

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Teaching is difficult. What works in one classroom cannot always be expected to work in the next. What works today with one group of students or trainees may not work with that same group the next day, or with a similar group at another time. The good teacher must exercise judgement consistent with the circumstances of the moment.

In their review of research on teachers' pedagogical thoughts judgement and actions, Shavelson & Stern (1981) set forth a framework which showed that the choices teachers make in the classroom are a product of antecedent conditions, professional characteristics, teacher cognitive processes, consequences for teaching and student learning, and teacher evaluation of their teaching.

Zahorik (1986) identified three conceptions of good teaching (a) a science-research conception, which conceived of good teaching as doing what effective teachers do, (b) a theory-philosophy conception, which viewed good teaching as implementing philosophical and theoretical models of teaching, and (c) an art/craft conception which viewed good teaching as being resourceful and creative. Upon reviewing these three conceptions, he concluded that the first two (science-research, and theory-philosophy) probably belongs in pre-service teaching, and that the third, art-craft should be emphasized during in-service teaching.

Eisner, probably more than others, has been the chief advocate of teaching as art and craft. Rejecting the notion of teaching as science, Eisner posits that teaching is governed by rules of thumb not hard and fast rules. He asserts that "skilled teaching requires the ability to recognize dynamic patterns, to grasp their meaning, and the ingenuity to invent ways to respond to them" (p.9). Teaching "is typically too dynamic for the teacher to stop in order to formulate hypotheses or to run through a series of theories..." p.10. Teachers must read classroom cues and think on their feet.

In like vein, Rubin discussed the question of "pedagogical intelligence," which entailed "not only a consummate understanding of the classroom milieu but also a prescience which evolves over time. The ability to "read" the early signs of frustration, to recognize cause of apathy, to anticipate student boredom, and to circumvent learning impediments..."(p 33). He distinguished between autonomous teachers who "make their own instructional decisions and base their teaching on the requirements of the particular teaching situation" and "prescriptive" teachers who follow rules and procedures.

The many things that good teachers do in the classroom have been deemed by Shulman (1987) to be pedagogical content knowledge--"that special amalgam of content and pedagogy that is uniquely the province of teachers" (p.9). Teaching is a learned profession. Teachers must understand "the structures of subject matter, the principles of conceptual organization, and the principles of inquiry" (p.9) attending their domain of practice. Shulman speaks of "the wisdom of practice." Within recent times, such wisdom is felt to be a manifestation of reflective practice (e.g. Liston & Zeichner, 1987; Sparks-Langer & Colton, 1991).

Examination of the HRD literature shows that a decided share of it focuses on instruction, with particular concern for issues relating to instructional materials and instructional design (e.g. Trip, 1994; Chinien & Boutin, 1994; Clement, 1990; Polak, 1990; Gendelman, 1991; and Jonassen, Grabinger, & Harris, 1990). Jonassen et al outline a range of instructional tactics that draw on some of the more promising instructional theory, including the works of Gagne & Briggs, (1979).

Also significant in the HRD discourse is an adult learning theory focus (e.g. Zemke & Zemke 1988), with some particularly the andragogical ideas of Malcolm Knowles (1984). It is not clear though whether the disposition to these ideas is critical in nature, as Pratt (1988) suggests it should, or whether it is an accepting one.

Method

A "culture of training survey" instrument consisting of 110 items was developed, drawing on instructional ideas derived from the literature as reviewed above. A ten-point Likert-type scale ranging from "weak" to "core" was employed for all items. The instrument was comprised of five sections, focussing on the following (a) beliefs about the nature of training (b) beliefs about

capabilities trainers should possess to be successful in the training room (c) beliefs about what are important outcomes of training (d) beliefs about adult learners and about adult learning, and (e) beliefs about what constitutes good training strategies and practices. A panel of three HRD practitioners independently critiqued the instrument. Their suggestions were taken into account in refining it. Since this was a uniquely created instrument, it was felt that the study itself would yield information as to its psychometric soundness.

A random sample of 350 HRD practitioners drawn from the American Society of Training & Development (ASTD) directory of the metropolitan area of a mid-Western state were surveyed. After three mailings, 187 usable returns (53.4%) were realized. Comparison of early and late respondents did not reveal any significant differences. Examination of demographic data showed that non-respondents had a profile no different from respondents. It was thus inferred that the non-respondents were not outliers. Reliability analysis of the returns yielded alpha=.95.

Data for each of the five sections of the survey were factor analyzed. Only factor coefficients of .40 and higher were considered. Only the first factors, and those that added significant increments of variance beyond it were examined.

Results

Nature of training The first section of the survey required subjects to indicate the extent to which each of 14 items was consistent with their beliefs regarding the nature of training. Factor analysis of their responses yielded a four factor solution that explained 59.9% of variance. The first factor explained 27.9% of variance, based on the coefficients of five items, as follows:

The job of the trainer is to help workers become better learners	.73
The trainer's job is to help workers to realize their fullest potential	.76
An important purpose of training is to keep workers intellectually challenged	.74
A purpose of training is to improve the desire of workers to continue learning	.85
Training should help workers become more thoughtful practitioners.	.55

Taken together, these items coalesced to reflect a humanistic conception of the nature of training. They have to do with enhancing the individual as opposed to productivity per se, or profit making. These were not the items with the highest means, but what factor analysis seeks is structure. Thus, the factor was named HUMANISM.

The second factor explained 14.8% of variance and was comprised as follows:

The job of the trainer is to help the organization/client offer a better service/product	.53
The test of the content of training	.72

programs should be workplace relevance

Trainers should keep their sights on the bottom line	.67
A purpose of training is to help remedy deficiencies in worker knowledge and skills	.53

Different from the first factor, this second factor focussed upon workplace efficiency, and was named CORPORATE. When juxtaposed, these two factors highlight a basic tension, between a concern for individual growth, but with an eye on the bottom line.

Capabilities trainers should possess The second section of the survey (17 items) focussed on capabilities that the respondents felt are needed by trainers to be successful in the training room. Factor analysis yielded a six factor solution, explaining 65.1 % of variance. The first of these factors was dominant, with six items explaining 38.6% of variance. These items and their coefficients were as follows:

(a) ability to pace instruction	.73
(b) ability to develop and use lesson plans	.78
(c) ability to use instructional media	.75
(d) Ability to find alternative ways to present content	.55
(e) ability to make judgements about the fitness of material to be taught	.46
(f) ability to simplify ideas	.52

When compared with other factors in this solution, this one was named BASIC SKILLS. It seemed to reflect critical minimums needed by practitioners who had instructional responsibilities.

Adult learners and adult learning The third section of the survey (18 items) focussed on beliefs about adult learning. This section resolved into a five-factor solution explaining 60.5% of variance. The first factor accounted for 25% of variance. It consisted of five items, shown next with their respective factor coefficients:

Adult learners vary in the extent to which they are self directed	.52
Adults vary in terms of the amount of relevant prior knowledge they bring to the classroom	.54
Adults vary in their temperaments (some are introverts others are extroverts)	.87
Adults vary in their learning styles	.89
Adults go through life cycle changes	.76

The latent theme of this factor clearly was that adult learners vary on a number of attributes and dispositions. They do not constitute a monolith. Thus it was labelled INDIVIDUAL DIFFERENCES. It was consistent with the critique of the idea of andragogy as set forth by Pratt (1988).

The second factor explained 11.9% of variance. Four items constituted this factor as follows:

Adults are interested in learning only when they can see its applicability in their day to day lives.	.67
Adults become ready to learn when some life experience dictates that they are	.67
Adults prefer content to be organized around life tasks. For example, they prefer to write business letters than essays	.75
Adults need to know why they should learn something	.81

This factor was labelled EXPERIENCE because it dwelled on existential factors relating to the lives of adults.

The third factor explained 10.5 % of variance. It consisted of four items, as follows:

Adults wish to evaluate their own learning	.53
Adult learning is goal directed	.55
Adult learners know what they want from instruction	.78
Adults dislike teacher centered classrooms	.77

The latent theme of this factor was consistent with standard adult learning theory as set forth by advocates such as Malcolm Knowles. It was labelled ANDRAGOGY. Different from the first factor, these items tend to view adults as a monolith.

Outcomes of training The fourth section of the survey (19 items) focussed upon trainees' beliefs regarding important outcomes of learning. The analysis yielded a four-factor solution, explaining 67.7% of variance. The dominant factor explained 43.4% of variance. It's items and their coefficients were as follows:

Trainees demonstrate good work attitudes	.68
Trainees embrace workplace values such as punctuality	.75
Trainees subvert individual needs for the good of their coworkers	.68
Trainees develop greater commitment to their job	.79
Trainees develop greater commitment to their careers	.71
Trainees understand who their internal customers are and what are their needs	.56

This factor was named WORKPLACE COMMITMENT, consistent with what appeared to be its underlying theme. The company took precedence over the individual.

The second factor was named LEARNING/APPLICATION, consistent with its latent theme. Here there was valuing of practical manifestations of instruction. Items and there coefficients were as

follows:

Trainees learn and can apply rules and formulas	.69
Trainees learn and can demonstrate work processes and procedures	.67
Trainees can immediately use what they learn back on their jobs	.76
Trainees can see connections between classroom learning and situations they may confront in the workplace	.63
Trainees understand company expectations better	.55
Trainees understand their roles better	.55

Good training practices When data for the fifth section (33 items) of the instrument (good training practices and strategies) were factor analyzed, they yielded a seven factor solution explaining 68.3% of variance. Again, there was a dominant first factor, explaining 39.2% of variance. Five items were important here, as follows:

Use simulations	.52
Utilize the lecture where appropriate	.66
Utilize the discussion where appropriate	.83
Utilize the demonstration where appropriate	.79
Utilize case studies where appropriate	.81
Utilize computer-assisted methods where appropriate	.55
Utilize games	.42

This factor was deemed MACRO STRATEGIES. The emphasis was on mastery of a core of basic methods. The second factor explained 7.4% of variance. Items in that factor had to do with MICRO-STRATEGIES, that were consistent with learning and instructional theory, as follows:

Proceed from familiar to unfamiliar content	.42
Provide an advance organizer to establish a conceptual frame for the lesson	.56
Adapt the content to learner preferences	.42
Help learners create concept maps	.83
Help learners create content outlines	.86
Help learners analyze key ideas	.71
Have a deliberate strategy for sequencing content	.40

This second factor included items that required a degree of sophistication in ones outlook as a trainer. It required depth of familiarity with mainstream conceptions of classroom practice.

Summary Respondents in this study viewed the nature of training along relatively discrete humanistic and corporate lines, with humanism the more organized and stronger value. They valued overt, macro-level capabilities (developing lesson plans, pacing, using media) over micro level strategies or classroom tactics. They viewed adults in individualistic rather than group terms. They valued organizational impact of training over other impacts. They valued overt teaching and training methods (lecture, discussion, demonstration) over more understated methods (such as using concept maps, or ability to sequence content).

Conclusion and reflection

This study sought to probe the instructional thoughts and preferences of HRD practitioners. The extent to which these practitioners valued mainstream educational conceptions of instruction was explored. It was surmised that the circumstances of training would mediate their beliefs. The results indicated that there was tension between a concern for individual growth, and the need for commitment to the organization. At an abstract level, humanism prevailed, but at a concrete level, corporatism prevailed. As to instructional strategies, while more educationally sophisticated options were valued, more basic options relating to the day-to-day were preferred--lesson plans over concept maps. An interesting finding was that an eclectic rather than a monolithic view of the adult learner was evidenced.

The findings of this study show that HRD practitioners take cognizance of the needs of their trainees, and value the idea of their individual differences and their need to grow. But their thoughts ultimately are mediated by the constraining factor of the bottom line.

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Designing Experiential Learning Into Organizational Work Life: Proposing a Framework for Theory and Research

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In this paper the author proposes a framework for experiential learning which will be applied in an organization. The components that are believed to facilitate learning are presented along with the conceptual foundation of the framework derived from other theoretical literature and related empirical studies.

Evidence suggests that structured formal *training*, defined as -- taking place in a classroom, facilitated by trainers, controlled by experts and structured -- plays an important role in learning and performance (Ellerington, Marsick & Dechant, 1992). However, other prominent scholars suggest *learning*, defined as -- taking place wherever problems are encountered, sometimes facilitated, controlled by learners and not as structured -- also contributes to as much or more of the process of learning and performance (Ellerington, Marsick & Dechant, 1992).

Few individuals, groups or organizations today fully recognize or are utilizing learning's potential. Possibly this is due to the fact that there are few frameworks in place to capture *learning* as it was defined above. If frameworks were implemented (creating more of a place and time for learning) perhaps learning would occur with more assurance.

In this paper, the components of a framework that facilitate learning are presented below. They were inspired by Courtney's (no date) speculative theory of experiential learning and design:

1) *the focus on real-world problems or authentic situations;*
2) *reflection on the experience;*
3) *social interaction as part of the learning process; and*
4) *balance of control between the designer and learner.*

For the remainder of this paper I will address:

1) How the above components can be implemented in an organization.
2) Related experiential learning theories and frameworks.
3) The value, significance and validity of the components and their related framework in the context of other experiential learning theories and frameworks.

Implementing the Components of Experiential Learning in An Organizational Setting

The framework begins when employees encounter unique problems or situations that arise at different time frames within the course of their work. It is assumed that it is impossible to teach a group one set of knowledge and skills because it is difficult to know what problems or situations each individual employee might encounter. If the situation is routine, the employee moves along with his or her work, thinking that no learning was necessary (Jarvis, 1987). But if the situation is out of the ordinary, one that the employee is not sure how to handle, s/he perceives a need to to gain competence (Schon, 1983).

The learning framework proposed would ask employees to identify these types of situations. In a course taught at a university I asked the learners to identify communication scenarios that they perceived were not handled appropriately *(e.g., one learner pursuing a career in banking had gone on a job interview. He perceived that he had "bombed" due to his lack of communication skills).*

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Additionally, I had provided the learners with a series of questions within which to assess themselves in order to become aware of the gap between their current performance and what more they needed to gain regarding experience, knowledge or skill.

> *What is your previous experience with communication problems like this one and of what does this inform you?*
> *What other learning possibilities could provide you with new knowledge or skills regarding your communication problems?*
> *What experiences, knowledge or skills do fellow colleagues have?*
> *Who can you learn from because they have more experience, knowledge or skills than you possess?*

Furthermore, within this framework there is no facilitator; only a resource advisor (who may be an HRD practitioner or a manager) engaged in accumulating and arranging physical or human resources for employees (e.g., *books were retrieved on "communication in the interview process").*

In order to keep track of the learning and reflect on it consciously, learners were asked to journal about their experiences with the learning process and what they were gaining by talking with colleagues (e.g. the learner journalled, "*I was going about the interview process all wrong. I had asked the bank president to tell me about the organization, when I should have informed him. . .*").

Finally, learning through social interaction occurs through conversations with those the learners perceive to have more experience, knowledge or skills than they possess (e.g, *the learner initiated an interview with a friend [colleague] who had recently retained a position in the banking industry. He asked his friend to relay tips regarding appropriate communication skills needed in the interview process*).

Within the framework for learning in an organizational setting, the four components that facilitate learning are embodied: 1) real experiences, 2) reflection, 3) social learning as part of the learning process, and 4) balance of control between designer and the learner.

Related Literature

Theoretical Foundation: The foundation for the components and related framework can be located in the epistemological base of constructivism. This learning base dramatically changes our conception of learning because of the way the paradigm suggests learning occurs. Constructivists contend that all knowledge is built from our experience. During the experience, the brain is continually seeking to impose order in some form -- to make generalizations from our experiences (Yager, 1991). Constructivists posit we are not passive learners, but active knowers (Jackson & MacIssac, 1994). Because of this, in order to truly understand -- to truly learn -- we must have some part in putting this framework together. Furthermore, our knowledge is not just out there, it is strongly influenced by our social interactions.

***Authentic Experiences*:** Analogous to the components and their related framework are a myriad of other theories and frameworks. Although different words are used to describe *experience,* authentic learning experiences are suggested as a key ingredient for learning by many scholars:

Dewey (1969) believed a human's ability to learn was embedded in real life or relevant problems the learner was interested in solving. Kolb (1984) proposed that learning begins with a shared, "concrete experience." Chickering and Gamson (1987) recommended that students "do things." Claxton (1990) asserted that experiences can be simulated by recalling previous experiences and placing them in case studies or other simulated experiences.

Freire (1976) referred to the importance of expressing "experiential realities" through the telling of current struggles. Mezirow (1981) asked people to make meaning of their own personal experiences. He felt this would facilitate individuals' "perspective transformation." Jarvis (1987) points out that learning and experience are not synonymous. One can have an experience without learning. Jarvis (1992) also reports on three different types of practical knowledge, "knowing how" (having knowledge about practice), "knowing that" (having knowledge of what happens when certain actions are taken) and "tacit knowledge" (knowledge that becomes internalized and is therefore difficult to articulate). Belenkey, Clinchy, Goldberger and Tarule

(1986) suggest that for women (and some men) there is a preferred way of knowing coined, "connected knowing." Connected knowing results from lived experiences or vicariously living through others' experiences. In contrast to connected knowing is "procedural knowing," knowledge produced separately from personal experience or feelings. Claxton found that Kolb's concrete experience and Belenkey et al.'s connected knowing were alike, while Kolb's abstract conceptualization was synonymous with procedural/separate knowing.

Schon (1983) proposes the importance of "framing" the context of a problem in the setting of an actual world of practice. He defines framing as the process by which we name the things to which we attend. Lewin (1948) designed the "action research" model. The process of action research begins when employees gather data on problems within the organization. Revans (1983) coined the term "action learning," which also entailed employees tackling real and urgent problems in the workplace that could not necessarily be solved by an expert solution. Argyris and Schon (1974) ask learners to record their language as a point of departure for learning. Marsick and Watkins (1990) have studied informal and incidental learning. Both of these types of learning take place in the course of working life. The entire process of learning can resemble an experience where learning may or may not occur.

Reflection on Experience: A second key ingredient often located within experiential learning theories includes reflection on the authentic experience:

Dewey (1969) proposed that after a problem arises, the mind struggles for a clearer conceptualization of the problem. Learners begin to look for possible solutions, and draw on previous knowledge. Kolb (1984) proposed that after a concrete experience one must reflect for learning to occur. This theorist also believes that one cannot have a concrete experience and simultaneously reflect. Kolb says that one must choose which learning mode he or she brings to bear within different situations. Chickering and Gamson (1987) say that students need to "think about" what they just finished doing.

Freire (1976) was concerned with raising the "critical consciousness" of groups. He asserted that answers to individuals' problems can be found within themselves. For Horton (cited in Moyers, 1983) education is not about teaching a thing. It is a process; more specifically, a thought process. Emotions and dialogue within the thought process are important to create critical consciousness. The thought process helps the oppressed name the realities of their world. Mezirow (1981) asks learners to bring schemata into consciousness and actively critique them. "Critical reflection" occurs when people contemplate previous experiences and ask themselves what worked or did not work in the past, so they can consciously name the source of the error. In contrast, simple reflection entails trial and error problem solving with little thought. There are methods to assist learners in becoming critically reflective. Two include journal writing and storytelling (Brookfield, 1987; Schon, 1991).

Jarvis (1987) states that learning occurs only if there is conscious reflection on situations. "The catalyst for learning is when disjuncture occurs between expectations and achievements" (p. 93). But if practitioners do not take the time, or they reject the opportunity, then "non learning" occurs. If this process is used often, performance will be diminished. Argyris (1982) states that reflective learning is called "double loop" learning. This is the type of learning that recognizes the incompatibility between a person's belief and one's action. In contrast, "single loop learning" is learning within the confines of our "theory in use," which entails not observing the underlying reasons why we act inconsistently with our beliefs. Belenkey et al. (1980) recommends the importance of validating learners' feelings, opinions and experiences as they are "given voice."

Schon (1983) proposes that "reflection in action" is possible, as practitioners think about and change what they are doing while they are doing it. The process of reflection begins with "reframing," which entails transforming perceptions into new understandings. Another step in the process entails "integrating perspectives," a process of "synthesizing divergent views." Furthermore, Schon affirms that sometimes practitioners do not reflect, they simply carry out actions without really thinking about them. This he calls, "knowing in action." Lewin (1948) conceived that as employees actively studied data derived from the organization, this would "unfreeze" understanding so that employees might better analyze and diagnose the problems of the organization. Likewise, with Revans' (1983) action learning, a facilitator is involved to help teams reflect on their own actions. Argyris, Putman and Smith's (1985) action science technology focuses entirely on reflection by uncovering the hidden reasons we behave differently -- "our theory in use" -- than we desire to -- "our espoused theory." Marsick and Watkins (1990) assert that informal and incidental learning take place with less conscious reflection. However,

informal learning involves more of a conscious effort than incidental learning. In order to learn informally or incidentally, employees must actively focus their attention to the messages associated with their actions. Boyd and Fales (1983) conclude that reflection is the most critical factor to ensure learning occurs.

The Social Nature of Learning: A third key ingredient, often advocated to facilitate learning within the context of experiential learning theories, concerns the importance of social interaction as a part of learning:

Kolb (1984) contends that interaction enhances learning. He wrote that: "Intelligence is not an innate internal characteristic of the individual, but arises as a product of the interaction between the person and his or her environment" (p. 12). Freire (1976) promotes learning through affiliation with others who have experienced similar struggles. Jarvis (1987) states that the social situation in which the learning experience is provided may determine the extent to which previous learning is provided or used. Belenkey et al. (1986) recommend, "collaborating in connected-knowing" groups. In Caffarella and Barnett's (1994) view, Belenkey et al. has been the most determined voice for including the affiliation needs of learners as an important component of learning.

Schon (1983) and Marsick and Watkins (1990) discuss the importance of "crossing boundaries." This occurs when two or more individuals or groups communicate about how to complete the tasks of work. Additionally, Schon supports the role of coach who engages in mutual reflection with his or her learners. Marsick and Watkins argued that professionals are more likely to learn informally and incidentally from peers. All action technologies [action research, action learning and action science] declare the importance of learning in groups (Argyris & Schon, 1974; Lewin, 1948; Revans, 1983) .

Balance of Control Between Designer and Learner: The last component advocates learning is facilitated when there is balance of control between the designer who creates a framework for learning and, the learner who selects the appropriate topic and resources deemed necessary for learning. Other theorists have also written about frameworks that provide some balance of control in learning:

Kolb (1984) cited that learning within the formal classroom should be designed and facilitated by an educator to depict a four-part process: 1) concrete experience; 2) reflection; 3) abstract conceptualization (making generalizations from the experience); and 4) active experimentation (trying the learning out in a new situation). Barnett (1989) has since extended Kolb's model to include a fifth stage, that of planning for implementation in the future. He inserts this stage between abstract conceptualization and active experimentation.

Freire (1976) and Horton (cited in Moyers, 1983) affirm that is it important that learning begin where people are presently at (struggles within their culture). Frameworks used at Highlander Folk school include: 1) sitting in a circle where each person tells stories about his/her struggles/experiences. 2) Next, a facilitator helps code the experiences into themes. It then becomes the job of the staff to build "channels" or "banks" through which dialogue can move. 3) The skills of problem solving are taught nonacademically when learners view the process of learning from each other's dialogue about possible solutions. 4) Occasionally, the facilitators will also tell stories. This technique serves to encourage thought and let learners know that the facilitator understands their struggles (cited in Clark, 1978).

Schon's (1983) process of learning is synonymous with Watkins and Marsick's (1990) process of group learning: 1) framing, 2) reframing, 3) integrating perspectives, 4) experimenting, and 5) crossing boundaries. Marsick and Watkins (1990) say that informal and incidental learning lack design by an outside source; however, each individual learner places his or her own design on the learning process. Lewin (1948) states the learning process has two main components: 1) unfreezing and 2) refreezing following the implementation of an action plan. Revans' (1983) process begins with an employee bringing a business problem that has been confronted in his or her work. A group of employees then work with the problem and "test the definition" that the employee has presented. Participants propose alternative ways to view the problem and present possible solutions. When the group decides on a possible solution, the employee determines an action plan for the problem. S/he is then held accountable for producing the results (cited in Froiland, 1994). Argyris and Schon (1974) use a very specific technology to help learners uncover their actions and compare them to their theories. This technology is called, "exposing the left-hand column" which entails articulating what is said in the left hand column and deciphering what the words mean in the right-hand column. Most critical to all action

techniques [action research, action learning and action science] is the involvement of a group-process consultant which helps the teams to reflect on the process of learning.

Watkins and Marsick (1992) forwarded a theory of how employees learn informally and incidentally. Informal learning begins with a non-routine situation in which the individual perceives a need to know more in order to adequately perform. This is followed by a period of reflection; then a search for new information; and finally experimentation with the new information. Strategies for informal learning include self-directed learning, networking, coaching, performance evaluations and trial and error learning. Incidental learning is stated as a by-product of some other activity (one example would be learning through mistakes).

Related Empirical Studies: In the following paragraphs are three related empirical studies that provide some additional insight into the components and framework I have suggested:

In a study by Jarvis (1987), educators were invited to change Kolb's (1984) experiential learning cycle based on their own experiences with learning. Possible problems suggested by the model were that perhaps the stages in Kolb's cycle are not sequential. Additionally, Kolb's model lends itself to talking about a very specific form of experience (a shared-concrete experience) but does not refer to other types of experience. Finally, Jarvis contends that Kolb's model may be a bit simplistic.

The outcome of study confirmed there are nine different routes from which an experience might or might not result in learning. These include type 1: "presumption" which describes learning through socialization; type 2: "non-consideration," which entails not responding to a potential learning experience; type 3: "rejection" which refers to misunderstanding embedded in the situations in which people find themselves; type 4: "pre-conscious," which entails having experiences but not thinking about them; type 5: "practice," which refers to practicing skills; type 6: "memorisation," which entails acquiring information; type 7: "contemplation," which refers to thinking about the situation; type 8: "reflective practice," which entails thinking while doing; and type 9: experimental learning" which refers to learning acquired through experimentation. Furthermore, Jarvis asserts that these nine forms of responses to a potential learning situation form a hierarchy. The first three are regarded as non-learning; while the last three are regarded as the highest form of learning.

Lovin (1992) accomplished a study that indicated the potential for informal learning may not only come from experiences in the workplace, but also from the type of work relationships in effect at the time the experiences occur. Spurring this qualitative case study was the importance of understanding the ways in which professionals learn informally. The study was based on the belief that understanding would provide insight into ways of enhancing both formal and informal learning. The informants were fifty-six paramedics who were self-selected for the study. The researcher validated her data by using: 1) critical incidents that participants had faced on the job and had written about; 2) semi-structured interviews, and 3) extended observations of three paramedics.

One outcome of the research was to outline the informal learning process. Lovin described the following stages: 1) acquisition phase: storytelling or "trading war stories" was used to acquire potential learning experiences; 2) formulation phase: this occurred when the paramedic perceived they did not have sufficient knowledge or skills to address the problem; 3) experimentation phase: this often involves taking a risk to experiment with new learning; and, 4) confirmation stage: which can lead to rejection of the learning or learning can become part of the learner's repertoire.

Lovin described that the potential for learning within the short-term partnerships of paramedics was minimal. Trust was more likely to develop between long-term partners which entailed the right to critique each other, to question or disagree. These rights become resources for learning which improves the ability of the partners to function as competent professionals together.

Mackenzie (1990) demonstrated that "learning how" as Jarvis (1992) describes it (knowledge gained through practical doing) is not an easy process for a recent student who has just become a practitioner. Using a qualitative ethnographic design, Mackenzie observed nursing students and noted there were three stages within the learning process while at work. The first stage was labeled "fitting in," which entailed learning from colleagues and other senior practitioners about common practice. The second stage was labeled, "trying and testing," during which time students moved from dependence on others to a more independent mode. The third stage she labeled, "reality of practice," in which the students learn to become practitioners through integration of practical knowledge from the classroom with that which is learned in practice.

Furthermore Mackenzie also describes that some of the rules actually taught were not being followed in practice (cited in Jarvis, 1992).

Value, Significance and Validity of the Proposed Framework

Theoretical literature and related empirical studies have been presented which form the basis for a framework for designing experiential learning into organizational work life. In the last section of this paper, I will address the value, significance and validity of the components that facilitate learning and the related framework in the context of others' theories and studies:

First, I purpose the components and related framework have value because they allow for more than experience as defined by Kolb's (1984) narrow conception. Kolb says that learning begins with a shared-concrete experience. This model may not be appropriate for employees whose experiences resemble a unique, rather than a shared experience. Jarvis (1987) contends there is more than one type of experience that can lead to learning. Constructivists would claim our perceptions are always influenced by previous knowledge and experience (Jackson & MacIsaac, 1994). Courtney (no date) asks an important question, "If our perceptions are theory-laden, why not our experiences also" (p. 16)?

Additionally, a second path to learning with experience *not* mentioned by Jarvis (1987) may be experience through vicarious learning. Vicarious learning occurs when we read qualitative studies, pour ourselves into stories from literature or see a movie of the intense kind, that makes us laugh, shudder, cry or cringe inside. Likewise, learning occurs from listening to others stories. In the workplace this would include employees listening to colleagues tell of their experiences. Lovin (1992) described the learning process in her study that begins with the telling of "war stories." She states that, "Personal involvement is not necessary for an experience to be acquired and the potential to exist for significant learning to occur" (p. 63). Also, Stake and Trumbull (1982) argue we learn in two ways. One way is to receive generalizations from others and a second way is to form generalizations from real or vicarious experiences.

Furthermore, it is important to consider that within the boundaries the of framework I am purposing, it is possible that those who do not intend to learn (the colleague) might also gain learning incidentally as a by-product of his or her colleague's situation or problem. This would be in line with Marsick and Watkins' (1990) description of incidental learning. The components and their related framework take into consideration each individual's experience and creates a possibility for learning to occur from the other.

Second, the components and related framework account for the importance of reflection in learning--a point that has been extensively expressed by other adult education scholars (see, for example, Arygris, 1982; Dewey, 1969; Brookfield, 1987; Jarvis, 1987; Kolb, 1984; Mezirow, 1981; or Schon, 1983). Schon would argue that experience and reflection can occur synonymously. He called this reflection in action. Courtney (no date) says that it is the "emotionally charged" nature of the learning that makes experience and learning one in the same. The framework I propose is of value because it may actually promote more of the emotionally charged conditions that can create experience and learning in one. Consider the possible emotions as employees become aware of the gap between what they are *not* capable of, and what more they need to learn to perform competently.

Furthermore, the questions found within the framework are a powerful tool to manifest reflection. The questions cause the employee to become more aware of his/her performance deficiencies, needs and goals. The process encountered is possibly synonymous with Schon's (1983) idea of learners acknowledging a non-routine experience. Likewise, Lovin (1992) called this the formation stage of learning in her study. Related to this, Marsick and Watkins (1990) propose employees learning informally sense a perceived need to know when they cannot perform to their own or others' expectations.

Third, the components and related framework are significant because they are unique. The framework I suggest lacks the use of a facilitator which is found in nearly all other related frameworks reviewed in this paper (see, for example, Arygris & Schon, 1974; Lewin, 1948; or Revans, 1983). Often the facilitator is either a process consultant or an intimidating subject-matter expert who helps the learner make sense of, or reflect on, his or her experience. Within the context of this framework, I suggest the facilitator becomes a resource coordinator, someone who searches for and places resources in employees' full view. This is done so employees may select

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resources as deemed necessary. The responsibility for learning and problem-solving will ultimately lie with employees.

Although there is no facilitator, others may still enhance the learning as the employee moves through the process. I affirm it is a colleague who is the candidate to enhance learning, due to his or her ability to help put the employee more fully at ease with oneself. Senge (1990) says that we need to be colleagues (whom he refers to as friends) to learn from each other. Likewise, Marsick and Watkins (1990) assert that learning through those we have relationships with at work is an important enhancer to informal and incidental learning. And, Belenkey et al. (1986) propose that affiliation needs are most crucial in learning. Finally, Lovin (1992) went so far as to say the relationships developed in learning may be a more crucial component than the experience itself.

Fourth, those responsible for coordinating learning in non-formal settings are in need of guiding frameworks. Specifically, those in need are managers whom lack a background in learning theory or design who are coaching employees. Or, HRD practitioners, in their evolution from trainers to learning consultants as the concept of "the learning organization" become more prevalent (Senge, 1990; Watkins & Marsick, 1993). Furthermore, this framework might also be applicable for an employee who wishes to take on a self-directed learning project, but prefers learning within the context of social interaction instead of isolation.

Fifth, the components and the related framework are of value to organizations concerned with employees' performance. Formally structured training may teach employee knowledge of practice. Of course, this is entirely different from actually performing competently (Mackenzie, 1990, cited in Jarvis, 1992). If organizations wish to ensure absolute transfer of learning to performance competency, learning must occur where performance is: within the experience of the workplace.

In Conclusion, I would like to address the question: "Are the components and the related frameworks valid?" The components' validity can only be speculated on because they are generalized from reflections on a single experience (Courtney, no date). Furthermore, portions of this framework have been experimented within my teaching practice, but have not been applied completely in an organization. Finally, many prominent scholars have suggested related theories and frameworks "do work," but what of this combination of many theories and frameworks? One cannot propose what the combination will produce. Finally, in addition to introducing components that facilitate learning and its related framework, both must be empirically tested before one can ultimately claim their value and significance. This should be the next step.

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A Case Study of the Development and Implementation of a Structured On-The-Job (SOJT) Training Program In The Coil Processing Industry

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This paper describes the development and implementation of a structured-on-the-job training program for assembly operators at one company in the Midwest. The three research questions focused on (a) what does previous research tell us about the uses, successes, and problems in implementing SOJT, (b) what framework can be adopted to implement SOJT, and (c) what is the outcome of implementing SOJT? Management support and trainer selection were deciding factors in program success.

When training is mentioned, most people think of formal off-the-job or planned in-house classroom learning experiences (Zemke, 1985). Yet most work related instruction occurs in the form of on-the-job training (OJT) during the actual performance of the task (Rothwell & Kazanas, 1990). The American Society for Training and Development (ASTD) estimates that industry spends $90 to $180 billion on employee development through OJT compared to $30 billion for off-the-job training. ASTD also estimates that employees learn 80 to 90 percent of their job tasks with OJT (Carnevale & Gainer, 1989). Even in companies that put a premium on developing employees through off-the-job sources, 60% of all training still occurs on the job (Wehrenberg, 1987).

OJT is generally defined as unplanned workplace learning that involves observation and imitation of experienced co-workers and feedback about job tasks (Rothwell & Kazanas, 1990). It usually entails a supervisor or a more experienced employee teaching a new or less experienced employee the aspects of a task or job. In some instances, the employee may be thrust into the work environment with little or no instruction. They are left to "discover" the technique of their job by themselves or by casually observing more experienced employees. This self discovery, informal observation, and instruction by peers creates many problems and inefficiencies such as inconsistencies in task instruction, peers unwilling to share job information, inaccurate task details, erroneous emphasis on tasks, and unsystematic job sequencing.

In contrast, structured on-the-job training (SOJT) is a planned, systematically developed approach to employee training at the work site (Cullen, Sawzin, Sisson & Swanson, 1976; Jacobs, Jones & Neil, 1992). This structured, systematic approach to OJT reduces the waste, inefficiencies, and inconsistencies inherent in unplanned OJT efforts. SOJT is formally defined as "the planned process of developing task-level expertise by having an experienced employee train a novice employee at or near the actual work setting" (Jacobs & Jones, 1995, p. 22). In general, this planned process involves one on one workplace learning that utilizes training objectives and plans, active guidance by a trained peer or supervisor, job aids and printed materials, and a systems approach (Jacobs, 1992).

SOJT is a not a new concept. Roots and examples of SOJT can be found in craft instruction from the middle ages, apprenticeship programs, craft guilds (Miller, 1987), and in the work of Frederick W. Taylor in the early 1900's (McCord, 1987). World War I saw extensive application of the method to shipbuilding through the work of Charles R. Allen. Allen developed what was know as the "four step" method of instruction (McCord, 1987). An advisory board formed by the National Defense Advisory Commission took Allen's "four step" method and expanded it to seven steps. This seven step system came to be known as Job Instruction Training (JIT) and was used extensively during World War II (McCord, 1987). Today, JIT provides the foundation of many SOJT programs. SOJT can be applied to a wide variety of job types and situations. These include management, staff, administrative, technical, clerical, service, and manufacturing jobs; to situations were large and small numbers

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of employees are to be trained; to prepare new or current employees; to new processes; and is appropriate for simple and as well as complex tasks (Jacobs & Jones, 1995; Jacobs et al., 1992; Sullivan & Miklas, 1985).

Problem Statement

Despite the long standing use of SOJT, surprisingly little published research is available on the topic (Rothwell & Kazanas, 1990) and although much is written about using the method, case studies describing implementations and research studies are few (Cluskey, 1992; DeJong & Versloot, 1994; Jacobs, 1990). Therefore the purpose of this study was to add to the literature by describing the development and implementation of a structured on-the-job training (SOJT) program for assembly operators at one Midwest company in the coil processing industry. The goal of the SOJT program was to train assembly operators to use a torque wrench in the product assembly process. In discussing SOJT systems, both Jacobs and Jones (1995) and Rothwell and Kazanas (1994) stress context analysis. Context analysis examines whether or not SOJT is appropriate for the situation. Prior to implementation, this factor was examined for this application. In selecting SOJT as the intervention for this manufacturing process, the training manager determined that (a) it was the appropriate solution for the training situation, (b) the organization was willing to adhere to changes needed for valid and reliable program implementation, and (c) the supervisors and employees were adequately motivated to undertake and participate in the SOJT program.

Research Questions

Several research questions guided the study. They were:

1. What does previous research tell us about the uses, successes, and problems in implementing SOJT?
2. What framework do others recommend when implementing an SOJT program and how can this be adapted to this manufacturing environment?
3. What would be the outcome of the development and implementation of SOJT in this one environment?

Research questions one and two involved an analysis and synthesis of the literature. Research question two also involved making informed judgements to apply a general framework to a specific application and organizational culture. Research question three represents the results of this case study.

Implementation Environment of the SOJT Program

The company involved, designs and manufactures custom-built coil processing equipment for the ferrous and non-ferrous industries. Its customers include steel, brass, and aluminum mills; metal service centers; and metal product manufacturers for the appliance and automotive industries. Coil slitting lines, tension levelers, shearing and cut-to-length lines were the most prevalent product lines. This plant was a widespread user of informal OJT in nearly every phase of its manufacturing operations and was interested in SOJT for three main reasons. These were (a) quality and reliability requirements, (b) safety concerns, and (c) ISO 9000 documentation requirements. The combination of these three factors made the application of SOJT potentially very significant to this company. The drive to introduce SOJT to the work environment was headed by the training manager who had been on the job for 3 months prior to the beginning of this project and had worked for several years as an industrial engineer and trainer in other organizations.

It was the assembly operations that were chosen for the development of an SOJT program. Assembly was a two shift operation with 43 employees; about one third of the production employees. All operators were white males between the ages of 20 and 60. On average, first shift operators had nine years of experience and second shift had three. In assembly, employees take machined and welded components and assemble the company's products by using threaded industrial fasteners (nuts and bolts). Prior to the implementation of SOJT, the procedure for installing the fasteners was subjective. Operators used a conventional wrench to tighten fasteners and when they believed it was tight enough, the task was complete. There was no objective measure of the torque (tension or clamping force) applied. Therefore, the purpose of the SOJT program was to train assembly operators to use a torque wrench during the product assembly process.

The industrial fasteners are often the weakest point in a product; yet they are the cheapest component (about $2.50 each). Failure of a fastener can damage an entire coil and other parts of the processing equipment. The resulting scrapped coil of steel could be valued as much as $77,000. Damage to other parts of the equipment can cost an additional $10,000, bringing the total lost to $87,000 (M. Starrett, personal communication, October 7, 1994). Despite the high cost of the scrapped product, perhaps the greatest potential loss is the cost of downtime. One customer estimates that an hour of downtime costs $250,000. A more typical example is $45,000 per hour (M. Starrett, personal communication, October 7, 1994).

Fastener failure is also an employee safety issue. Because of the speed at which a coil of steel or aluminum is processed (600 ft/min to 1500 ft/min) and the weight involved (20,000 to 70,000 lbs. per roll), vibration during the production process can put extreme shearing forces on the fasteners. In one example, an improperly installed fastener was shot out of the processing equipment with enough force to penetrate a sheet metal wall (J. Sacksteder, personal communication October 8, 1994).

Another benefit of SOJT to this organization was its potential adaptability to the ISO 9000 quality series. SOJT is first of all structured, making its delivery consistent across a variety of trainers and trainees. It also requires mastery by the trainee, through some type of demonstration/performance checklist. The ISO standard is heavy on documentation requiring organizations to verify their actions according to company standard operating procedures (Stovicek, 1993). The implementation framework of SOJT ensures that training is delivered consistently and learning/mastery has taken place.

Research Question One: Previous Research

Previously published case studies highlighted here describe the application of SOJT to tasks performed by operators in a truck assembly plant (Jacobs et al., 1992), food service workers (Cluskey, 1992), entry level lab technicians (Jacobs & McGiffin, 1987), assistant bank managers (Sullivan & Miklas, 1985), and plastic extrusion operators (Cullen et al., 1976).

Jacobs et al. (1992) This case study was conducted in a large truck assembly plant in the Midwest. Its purpose was to compare the forecasted financial benefits of unstructured and structured on-the-job training. The researchers used the financial forecasting model developed by Swanson and Gradous (1988). Three tasks were chosen for SOJT implementation from a list of 40 based on turnover rate and task difficulty. Across all three tasks, SOJT was five times more efficient than unstructured OJT. From a financial perspective, the benefits forecasted for SOJT were approximately twice those of the unstructured option. Since this study focused on financial benefits, details regarding the implementation process were absent from the publication.

Cluskey (1992) This experimental study involved food service employees of a large hospital. For the operation selected, there were a variety of tasks to be learned, the pace of the operation was hectic, and the turnover rate was high. SOJT appeared to be the practical answer for training these employees. Cluskey's implementation involved four components: (a) a workshop for trainers, (b) printed guides and support materials, (c) implementation, and (d) an SOJT performance support systems. This experimental study included pre and post test examinations of a control and an experimental group. Results of the statistical analysis did not indicate any significant differences between the groups. However during post implementation interviews, Cluskey discovered that trainees in the experimental group did not do the required reading of the training manuals. Therefore her study highlighted the importance of employee motivation and top management follow-up in successful implementation.

Jacobs and McGiffin (1987) Their case study was conducted in a large company that processed and packaged a wide range of edible oils. Large quantities of unrefined oil were received by tank car or truck daily. As the oil was processed, lab technicians took samples and performed tests to ensure product quality. The focus of this study was the entry level lab technicians who performed the quality tests. Jacobs and McGiffin implemented a three part program of (a) supervisory training designed to teach SOJT; (b) extensive job analysis (resulting in a training structure, job aids, and manuals); and (c) performance checklists (for feedback and certification). The results were a level of job mastery by the entry level lab technicians in 3 weeks that formerly took 12 weeks to achieve. The financial benefits of the program were also impressive. The SOJT program cost $4,400 and generated $15,000 gross savings per year.

Sullivan and Miklas (1985) Sullivan and Miklas established a nine month program to train new assistant bank managers using. Their SOJT program involved coordination from 13 different areas of the bank, mentors, mentor training, procedure manuals, performance checklists, and a trainee/supervisor reporting system.

Although no quantitative data was cited in the article, the authors reported that the new assistant managers seemed to have achieved a level of competency in a shorter time than those who became new assistant managers prior to SOJT implementation.

Cullen et al. (1976) The purpose of this study was to compare semiskilled production workers trained using SOJT and informal OJT methods. The operation chosen for the study was plastics extrusion. Training was conducted at the Bowling Green State University (BGSU) Industrial Manufacturing Laboratory and involved 40 subjects; 20 in each group. Plastics extrusion was chosen as the study focus because BGSU possessed a similar extruder to the one operated by Johns-Manville who funded the study. The researchers found that those trained by the structured method achieved competence in significantly less time and had 70% less production losses. In addition, the cost of the structured program was virtually equal to that of the unstructured program.

Summary Some of the key advantages of SOJT include (a) reduced time to job mastery (Cullen et al., 1976; Jacobs et al., 1992; Jacobs & McGiffin, 1987), (b) strengthened supervisor employee relations (Jacobs et al., 1992), (c) consistent presentation of job and task information to each employee (Jacobs et al., 1992), (d) developmental opportunities for supervisors or peers who conduct the training (Black, Ezell, & Zenner, 1994), (e) cost savings from decreased production losses and a reduced employee learning curve (Cullen et al., 1976; Jacobs et al., 1992), and (f) opportunities for employee or union involvement in the training process (Black et al., 1994). SOJT is not appropriate in situations where jobs or parts of jobs must be done correct the first time, employees face safety hazards if the job is not correctly completed, daily work distractions cannot be minimized, and peers or supervisors do not possess the motivation, skills, time, or resources to conduct the training (Rothwell & Kazanas, 1990). As with any intervention, barriers to success include a lack of planning, insufficient analysis, careless selection of trainers, lack of rewards and recognition for those implementing the program, inappropriate applications, and scanty organizational commitment (Black et al., 1994; Jacobs & Jones, 1995).

Research Question Two: Recommended and Applied SOJT Methodology for This Environment

The second research question focused on the framework recommended by others when implementing an SOJT program and how this could be adapted to this manufacturing environment. As noted earlier, this question involved an analysis and synthesis of the literature, as well as making informed judgements about applying a general framework to this specific organization, its management structure, culture, and systems. Our implementation framework was adapted from the work of Jacobs and Jones (1995), Rothwell and Kazanas (1994), and Yang (1995) and conceptualized as a systems approach (Goldstein, 1993; Tracey 1992). The components of the system were:

1. Needs Analysis. According to Jacobs and Jones (1995), Rothwell and Kazanas (1994), and Yang (1995) this component involves management, training professionals, and line experts working together to produce a needs and task analysis and a comprehensive implementation plan. In our application, plans called for the formation of an SOJT design committee to include a subject matter expert in torque application, the operations manager, operator group leaders for each shift (union), line supervisors from each shift, and the training manager. The role of the committee was to advise on all phases of the project. Committee roles were to be defined for each member and distributed by the operations manager. Formal meetings were to be called as necessary. Needs analysis, task analysis, and workforce knowledge assessment were to be completed by the training manager with review and input by the design committee. Standard operating procedures were also to be documented and clarified through the design committee.

2. SOJT Program Design and Development. Products of this stage should include performance objectives, learning materials, pilot testing/revision of learning materials, delivery and evaluation plans as well as evaluation tools. Success of this stage depends on collaborative interaction and support among training professionals and line management (Jacobs & Jones, 1995; Rothwell & Kazanas, 1994; Yang, 1995). In our situation, the training manager was to work in conjunction with the design committee to establish performance objectives for the torque training and a content outline. An initial performance checklist was to be generated by the training manager and the supervisors. The training manager was to work in collaboration with the design committee to develop printed guides, performance checklists, and a reaction survey for the employee training. A pilot test of the materials was planned.

3. Train-the Trainer Implementation. Management, training professionals, and line experts all contribute to this stage. Critical products here include criteria for selecting trainers, conducting the train-the-trainer program, selecting trainees, and finalizing the SOJT training plan (Jacobs & Jones, 1995; Rothwell & Kazanas, 1994; Yang,

1995). Trainer selection criteria based on the work by Cluskey (1992) was to be summarized and circulated to the design committee. The training manager was to modify a train-the-trainer program by Rothwell (1990). The training manager was to develop a reaction survey for the train-the-trainer program. Plans for implementing SOJT with the employees were to be finalized.

4. SOJT Program Delivery. Again management, training professions, and line experts are important collaborators. The primary product at this point is the employee training and monitoring of the SOJT process (Jacobs & Jones, 1995; Rothwell & Kazanas, 1994; Yang, 1995). Our plans called for supervisors to train employees over a three week period. The primary focus now was to be the employee training and monitoring of the SOJT process. The operations manager volunteered to hold meetings with each work group to introduce SOJT to the assembly employees.

5. Evaluation. Training professionals and line experts are the primary contributors during this stage. Determining the value or worth of the program is the main focus and involves an examination of employee performance (immediate and long term), trainer performance, training materials, and the training process (Jacobs & Jones, 1995; Rothwell & Kazanas, 1994; Yang, 1995). For this study, supervisors would complete the performance checklists at the end of the training period and discuss the results with the design committee. Formal plans were not made for long term performance evaluation until the results of this one implementation could be analyzed.

An important facet of the models by Jacobs and Jones (1995), Rothwell and Kazanas (1994) and Yang (1995) was recognition of the importance of factors related to change management, management involvement, communication, employee motivation, and collaboration with the training professional. The integration of these factors into the SOJT training cycle is fundamental to fostering a true learning organization (Ellinger & Cseh, 1995).

Research Question Three: Implementation Results

There is an old saying something along the line that even the best laid plans go astray. That certainly applies to this study. The results of the implementation were as follows:

1. Needs Analysis. The quality manager and the engineering manager were added to the design committee at the request of the operations manager. Their addition was seen as a positive augmentation to the project. Second shift did not contain any operator group leaders so the second shift supervisor became the representative from that shift. Formal meetings of the committee were not held due to schedule conflicts among the committee members. Instead, most consultations were one on one: the training manager with an individual committee member. With the informal nature of the committee, the operations manager and two first shift supervisors became the primary active committee members. The workforce knowledge assessment phase did not go as planned. After the training manager had conducted a few individual interviews with employees, the operations manager realized that there now existed a listing of tasks and a rough outline of torque procedures. The operations manager then called a formal meeting with the affected employees. At this meeting, the operations manager asked the group leaders to take the rough copy of torque procedures back to their groups and begin to get them involved. From an employee involvement perspective, this was a good decision; but from a workforce knowledge assessment standpoint, the training manager's ability to obtain a true picture of workforce knowledge was now distorted. Therefore, this aspect of the research was discontinued. All other aspects of the analysis phase went as planned.

2. SOJT Program Design and Development. As planned, performance objectives were established for the torque training and a content outline was generated. The training manager worked in collaboration with the design committee to develop printed guides and performance checklists. An SOJT trainee reaction survey was not developed due to the employees' reluctance to use paper and pencil instruments. A pilot test of the materials was not completed due to the straightforward nature of the torque procedure. In its place, the design committee reviewed and approved the materials.

3. Train-the Trainer Implementation. Trainer selection criteria based on the work by Cluskey (1992) was to have been summarized and circulated to the design committee. The criteria were developed, but not used because the operations manager decided to have the three supervisors and five group leaders act as the trainers. The training manager developed a train-the-trainer program based on the work of Rothwell (1990), Cluskey (1992), Lewick-Wallace and Jask (1988), Gold (1981), and Wichman (1989). The final train-the-trainer program was conducted in one session lasting two and one half hours for the eight SOJT trainers (three supervisors and

five group leaders). Initial planning called for a role play activity where the SOJT trainers would have a chance to practice teaching another employee. Time constraints made this activity impossible. A reaction survey for the trainer program was developed and used at the end of the program. Eighty-six percent of the SOJT trainers believed the program met its objectives and 75% felt it was effective. However, commitment and motivation to serve as an SOJT trainer was mixed. Plans for implementing SOJT with the employees were finalized.

4. SOJT Program Delivery. Momentum and enthusiasm for the program at this point was quite good. Because of the positive momentum and the operations manager's hectic schedule, the decision was made to not have the kick off meetings with the employees. This turned out to be a fatal mistake as some SOJT trainers interpreted this as a lack of management support for the program. Original plans called for supervisors and group leaders to train employees over a three week period. Three of the group leaders trained 24 of their 35 employees in this time frame; 43 total operators were to have been trained.

5. Evaluation. This phase was not completed within the original time frame as some SOJT trainers did not complete the employee training.

Conclusions

The application of torque to threaded industrial fasteners was a good task to begin the implementation of an SOJT program at this company. The torque procedures were conceptually straightforward, allowing for thorough SOJT development, while having sufficient organizational significance to warrant the need for improvement. In general, improvements generated by this study came from three areas. These were: (a) the development of SOJT trainers along with a program for further employee development, (b) the development and documentation of operations (torque) procedures, and (c) the implementation of a framework to expand SOJT to other portions of the organization. Recommendations that would have improved the implementation of SOJT in this company come from two areas. These were sustained upper management support and SOJT trainer selection as recommended by Jacobs and Jones (1995) and Rothwell and Kazanas (1994). In analyzing the positive and negative aspects of this case study, we wish to frame our conclusions around three issues. These are (a) implications for practice, (b) implications for theory, and (c) implications for research.

From this study, it appears that the frameworks espoused by Jacobs and Jones (1995) and Rothwell and Kazanas (1994) provide a solid basis for practitioners who wish to implement SOJT systems into their organizations. The synergy created by combining the ideas and guidelines from the two works provides a powerful tool for new and seasoned practitioners. The bulk of the collective ideas from the two works address the technical aspects of implementation; yet do not ignore the interpersonal, and business aspects of an SOJT intervention. Many practitioners, especially novices, may assume that the bulk of the project time needs to be spent on the technical aspects of the program. The results of this case study do not bear this out; for it was the interpersonal and business aspects that proved to be the weak link in the project. Therefore, we would recommend that practitioners expend equal thought and energy on the interpersonal and business aspects of an SOJT implementation.

Every new intervention is a challenge for the organization because its people must embrace and respond positively to change. This company now has the beginnings of a program that can bring about improvements in their technical skills training; but no matter how carefully developed a program may be, if the interpersonal and business aspects are not fully integrated into planning and implementation, then the full benefits of the program will not be realized. SOJT is a change program and in order for change to be implemented effectively it must have management support, especially top level management. In this case, initial management support was strong. However that support was not consistently visible and appeared to wavier as schedules became tight. In addition, the training manager discovered after the program was 70% complete that the implementation of SOJT procedures was a concern to some of the more senior shop supervisory and production personnel. Apparently an attempt was made 10 years ago to implement a similar program that did not meet with good results. Because of these circumstances, a strong momentum could not be maintained.

Another premise to be dealt with is, that because an individual is in a supervisory position, he/she will take well to an instructor/trainer role. In this application, the operations manager decided that supervisors and group leaders were paid more and held authoritative positions, therefore they should be the SOJT trainers. This implementation would have gone smoother if the instructor role was not delegated, but made on the basis of the criteria suggested by Cluskey (1992), Jacobs and Jones (1995), and Rothwell and Kazanas (1994). This was one

of the criticisms voiced at the end of the train-the-trainer program, and one that needs to be firmly addressed in other SOJT program implementations.

This study of a real life organizational problem and others like it can contribute SOJT theory building by providing researchers additional information regarding the factors affecting successful implementations. Researchers can then use this data to begin constructing correlational models for testing. As models are proposed, researchers can systematically test the hypothesized relationships, furthering our understanding of this effectual intervention, and in turn apply our new knowledge to future organizational problems--thus completing the cycle of practice, theory, research, and practice.

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Structured On-the-Job Training: Pre-design Analysis Activities

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In the design models for OJT emphasis is rather exclusively on task analysis and the learner's prerequisite skills. A broader consideration of trainee characteristics and work environment conditions is proposed. In this paper focus is on measurement and implications of trainee characteristics and workplace conditions.

In the current discussion about designing On-the-Job Training (OJT) in the pre-design analysis phase strong emphasis is on analyzing work tasks focusing on the determination of the content for OJT (see for example Jacobs & Jones, 1995). The question is whether this is sufficient to design effective OJT. Recent studies showed various factors that enhance or inhibit learning, training and transfer of training. Based on a review of transfer literature Baldwin & Ford (1988) distinguished three categories of factors that affect the effectiveness of training: work environment characteristics, trainee characteristics and training design.

With regard to the work environment recent publications reported several important factors influencing training effectiveness. Critical factors are the role of colleagues, the role of the supervisor and work load during all phases of the training event. Furthermore, Rothwell (1991) stressed the influence of the organizational climate on the possibilities for the use of OJT. Support of colleagues contributes to the trainee's self-efficacy and coping strategies for solving problems (Latham & Crandall, 1991) and has an positive impact on the employee's performance (Becker & Klimoski, 1989) With regard to the role of the supervisor Becker & Klimoski (1989) reported this was the most powerful source of feedback. Gielen (1995) found supervisory support was indirect linked to performance and had a direct impact on trainee's self-efficacy and job involvement. Finally, in several publications the influence of the work load is mentioned (see for example, Baitsch & Frei, 1980; Onstenk, 1994). High levels of work load are perceived as a barrier for acquiring new skills because of time constrains. With regard to the assessment of employee characteristics Baldwin & Ford (1988) suggested that trainee characteristics were most accountable for training outcomes. Important variables were ability and experience. Rather than concentration exclusively on the trainees' prerequisite skills and knowledge in the current thinking about needs assessments more emphasis is placed on the trainees' (learning) attitudes, interests and perceptions (Richey, 1995). Rothwell & Kazanas (1992) reported various employee characteristics to take into account for training design such as work experience and learning style. With regard to the latter characteristic several attempts have been made to identify learning styles and match them with instructional strategies (Vermunt, 1992). An important aspect of a person's learning style is the ability to learn self-directed. Rothwell stressed the importance of this ability because in the case of OJT a trainer is not always permanent available in the workplace.

Above mentioned characteristics contribute to a design of OJT that meets better the preferences and the abilities of the trainees and the specific circumstances in the workplace resulting in a more powerful training environment. In this paper focus is on analysis of employees characteristics and workplace characteristics. The research question that is addressed in this paper concerns the contribution of the analysis of employees characteristics and the analysis of workplace characteristics to the design of OJT.

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Methodology

Corporate setting. This research project was carried out among the franchise post offices of the Dutch Post Office Organization. The franchise post office is a new phenomenon. The independent entrepreneur enters a contract that settles which products and services of the Post Office Organization will be sold in his franchise post office. In most cases the entrepreneur contracts employees to work as desk clerks in his office. The immediate cause for this research project was the necessity to design a product-oriented training that meets the needs of the desk clerks within these new franchise post offices. The HRD-department suspected that training for desk clerks in these offices was necessary. As a training method OJT combined with CBT was perceived as most suitable. However, no information was available with regard to what specific tasks should be included in the training program. Furthermore, no information was available about desk clerks' background features, their willingness to participate in training programs, their learning styles and their appreciation with regard to OJT and CBT. Also was not clear on which conditions employers were willing to invest in training. All these topics were included in the research project. In this paper focus is only on workplace and employee characteristics. The practical aim of the research project was to gather descriptive data that provided input for the design of the training program.

Questionnaires. Data from two surveys are presented here. In survey 1 employee characteristics was an important topic and in survey 2 workplace characteristics was one of the major topics. Survey 2 consisted of two separate versions for employers and employees.

Sample. The whole population of eighty franchise post offices was included in the sample. They were split up at random in two equal groups of forty. Each group of forty offices was questioned with one of the two surveys. The sample for survey 1 consisted of 118 desk clerks. In many offices the employer also performs desk clerk tasks so the questionnaire was completed by employees and employers. Response rate was 64% (75 respondents). Response rates for the workplace characteristics survey were 55% (22 employers) and 60% (47 employees).

Workplace characteristics. Following variables were included. Employer's feedback consisted of a four-item scale only rated by employees. Feedback of colleagues was only rated by employees and contained three items. Perception of solving work problems was a scale of four items. For the measurement of the time available for OJT a scale of four items was constructed. These items focused on the time constrains related to opportunities for OJT in post offices. To measure the willingness to invest in employee training five single items only rated by employers were included. Willingness to be involved in employee training was measured with four two-point scale items that were only rated by employers. With exception of the four latter items, all other items used five-point rating-scales.

Employee characteristics. As much as possible existing scales were used. Gielen's job involvement six-item scale was used (Gielen, 1995). Three learning style variables developed by Vermunt (1992) were included. Acquiring knowledge measured a person's preference toward mental activities focusing on memorising facts and procedures, applying knowledge rated a person's preference to emphasise the application of the training content. Self-directed learning measured the ability to carry out cognitive activities for monitoring the learning process. One learning style variable constructed by Kwakman (1992) was included that measured employee's problem solving attitude (active versus re-active) in work settings. Appreciation of different types of training programs was measured with six items that were used also by Cramer & Thijssen (1994). Appreciation for specific training conditions were rated with five items. In every post office manuals are available that contain the desk clerks' tasks procedures. The appropriateness of these manuals to serve as a book of reference in training programs was measured with a scale of six items. Also a scale of six items was constructed that focused on the actual use of these manuals in the respondent's work setting. All items concerning employee characteristics used five-point rating scales.

Background variables. Several items were adjusted in both questionnaires that focused on educational level, length of contract, hours per week, type of contract (employer or employee).

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Results

Reliabilities varied between α.56 (self-guided learning) and α .84 (feedback employer). The rather low reliability of self-guided learning is equal to the reliability Kwakman (1992) reported. Elimination of items to receive acceptable reliabilities was necessary for several scales. For all the scales with regard to workplace characteristics the same division of rating points was used: 1 = very high to 5 = very low.

Feedback. Respondents reported sufficient feedback from their colleagues (M = 2.38, SD = .88) and their employers (M = 2.26, SD = .91) on their performance. Items of both variables were rated only by employees. The oneway analysis of variance showed that months working as a desk clerk was related to the perceived feedback of colleagues (F = 2.60, p.05). Respondents that worked more than two years reported significant less feedback of their colleagues.

Time constrains for OJT. The mean of this variable indicated that time constrains did not really exist (M = 3.01, SD 1.05). However, the variability around the mean showed that among respondents rather different perceptions existed with regard to the possibilities for OJT in the post offices.

Problem solving. Respondents perceived the organizational climate as a rather open climate wherein problems and mistakes are discussed in a positive manner (M = 1.93, SD = .62).

Employers' willingness to invest. The willingness to pay travelling expenses for employees that attend training in a training centre was modest (M = 2.90, SD = .1.45). This is also valid for their willingness to supply for employees that must leave their workplace for an evaluation meeting in a training centre (M = 2.63, SD = 1.46). The absence of an employee for a whole week in case of off-the-job training activities is less appreciated (M = 3.16, SD 1.46). Employers are not willing to pay for hotel accommodations for their employees (M = 3.58, SD 1.31). Because training is perceived as an important instrument to improve quality of the post office services, employers receive a bonus of $ 1560,- of the HRD-department for every employee that attends training. The mean score revealed this bonus is perceived as somewhat insufficient (M = 2.56, SD 1.10). Oneway analysis of variance showed that valuation of the bonus was related with the length of time employers served (F = 3.75, p.04). A longer length of time correlated with lower valuation scores. In general, there was considerable variability around the means of the items that measured employers' willingness. This indicated that among employers various opinions existed with regard to their willingness to invest in employee training.

Involvement in employee training. Four items with yes/no ratings were used to measure the employers' willingness to be actively involved in the training of their employees. For all four items counts that training was defined as OJT delivered by a professional trainer from outside the office. 19 from the 22 employers rated these four items. Here percentages are reported. 63% appreciated a discussion with the trainer and their employees before the training to discuss the training content. 58% wanted to be informed by the trainer about their employees' progress. To play an active role as a trainer was valued by 37% of the employers. Only 21% of the employers wanted to map out an written agreement containing the division of tasks and responsibilities of the trainer, the employee/trainee and the employer.

Below the findings of the survey focusing on employee characteristics are reported. In many cases the employer also perform desk clerk tasks. Therefore the ratings below are based on the mutual scores of employees and employers. For all the scales with regard to employee characteristics the same division of rating points was used: 1 = very high to 5 = very low.

Job involvement. The mean showed respondents are slightly involved in their work (M = 2.60, SD .62). It appeared that employers were more involved than employees (F= 9.39, p.00).

Training preferences. The ratings showed that a training in a training centre was most appreciated (M = 2.16, SD .87) and second best was OJT delivered by a professional trainer.

(M = 2.21, SD 1.09). Both types of training are almost equally valued. Less appreciated was OJT delivered by the employer (M = 2.95, SD =1.10). For the employers the phrasing of this item was different. They were asked to rate the appreciation of OJT with the district post office manager as a trainer. Respondents have hardly no appreciation for self-study with CBT (M = 3.41, SD 1.09) or self-study with written training materials (M = 3.64, SD 1.02). The least appreciation existed for not to attend training programs at all in case of learning needs (M = 3.88, SD 1.02). In general, there was

considerable variability around the means of the training program items. This variability was not explained by demographic variables as educational level or type of contract (employee or employer). With regard to the appreciation for training conditions all were highly appreciated. These training conditions were regular feedback, the use of an advanced organizer at the start of the training, active participation in training activities, learning in individual pace, focus on applicability of the training content. For all the five training conditions items no links with background variables were found.

Learning styles. The mean of the variable application of knowledge showed that respondents were focused on application of rules and concepts in the work situation (M = 1.52, SD .50). Less emphasis was found on activities for acquiring knowledge (M = 2.60, SD .57). The variable self-directed learning that measured the cognitive activities to monitor the own learning process showed respondents were able to do this (M = 2.34, SD .67). This is also the case for the variable self-guided learning that rated the attitude of respondents toward problem solving (M = 2.17, SD .64). The variability around the means of the learning style variables was rather limited. It was not explained by the background variables, with exception of educational level for one of the four learning style variables but no clear interpretable pattern existed.

Use and appreciation of manuals. The mean showed that these manuals are consulted quite often (M = 2.15, SD .71). The appreciation of the manuals was also rather positive (M = 2.43, SD .61). The use of the manuals was linked with the working hours per week. Respondents that worked no more than 20 hours consulted these manuals less (F=2.65, p.04). Most parttime desk clerks work during hours when work load is high. Apparently they had less possibilities (quiet moments in their work) to consult these manuals.

Cluster analysis. Involved in this analysis were the learning style variables and the items that measured appreciation of training programs and appreciation of training conditions. The cluster analysis resulted in two clusters. One cluster consisted of 50 respondents and 20 respondents belonged to the other one. A two-tailed t-test was performed with the clusters as grouping variable for all variables involved in the cluster procedure. Results are summarized in Table 1.

In general, the respondents of cluster 2 had lower ratings of all the four learning style variables but only with regard to self-directed learning there existed a significant difference. Lower scores indicate higher ability/stronger emphasis on performing these aspects of the learning style. Five types of training programs were found with significant differences for the two clusters. Inspection of the means showed respondents in cluster 1 only appreciate the training centre and OJT with a professional trainer, while the respondents of cluster 2 appreciated other types of training too and they much stronger rejected the idea of not to attend training activities in case of learning needs. For three of the five training conditions significant differences were found. A general pattern was that respondents of cluster 2 emphasised stronger the presence of training conditions, with exception of the immediate application of the training content in the own work setting.

Differences between both clusters for the background variables were also examined. For one variable, length of time working as a desk clerk, an significant difference was found. The results of the t-test showed that respondents of cluster 1 worked longer as a desk clerk than the respondents in the other cluster (p. 05). For the variables job involvement, use and appreciation of the manuals no differences between both clusters were found.

Table 1. Cluster means for learning style, training programs and training conditions

Variables	Cluster 1 (n=50)	Cluster 2 (n=20)
Learning style		
Using knowledge	1.59	1.54
Obtaining knowledge	2.68	2.62
Self-directed learning	2.53	1.93**
Self-guided learning	2.19	2.07
Training programs		
Training centre	2.02	2.35
OJT delivered by trainer	2.46	1.80*
OJT delivered by employer/ district manager	3.34	2.10**
Self-study with CBT	3.78	2.35**
Self-study with written training materials	3.84	3.35*
No training	3.68	4.40**
Training conditions		
Regular feedback	1.74	1.30**
Advanced organizer	1.82	1.45**
Active involvement	1.76	1.55
Individual pace	2.24	1.70**
Application training content	2.06	2.20

Two-tailed t-test ** $p < .01$ * $p < .05$

Implications of the study

For employees as well as their employers of the franchise post offices there are no obligations to attend training programs delivered by the HRD-department of the Post Office Organization. Participation is voluntary. Consideration of the desk clerk training needs, their attitudes and interests and workplace features is therefore necessary to design training programs that are highly appreciated and practicable.

The findings of this study suggest that most valued are the training in a training centre and OJT delivered by a trainer. Valuation of both training programs was almost equally. These two types of training programs have in common that instruction is provided by a professional. Especially types of self-study training programs are not appreciated by the majority. The intention of the HRD department to offer desk clerks OJT seems therefore a suitable solution when one takes in mind the expressed preferences.

With regard to the workplace conditions there are no real barriers for the use of OJT. As the findings indicate there exists an organizational learning climate in the offices wherein providing feedback and discussing problems are legitimate. Especially for OJT these workplace conditions are obvious of paramount importance because the training takes place in the actual work setting. Also there exists some willingness of employers to be involved in the OJT of their employees. As research

implies, employers actual involvement in employee training contributes to the employees' efforts to acquire and applicate knowledge and skills in their jobs and is therefore an important factor for positive training and transfer results. A possible barrier for the use of OJT is the time available for training in the work setting. However, the alternative, off-the-job training, encounters more opposition of employers. In general, there is only very modest willingness to accept the financial costs and the absence of employees that are the consequences of off-the-job training.

The idea to combine OJT with CBT delivered as a self-study program is not without problems. Although CBT might be an attractive solution because it offers trainees the possibility to study in their own pace, there exists some resistance against CBT. This is also valid for the ratings with regard of self-study with written training materials. A possible explanation for this resistance is that self-study programs require more of trainees' perseverance. In the case of self-study programs there is no trainer that takes over some control of the learning process. Apparently, respondents appreciate 'trainee control' (learner control) less than 'trainer control'.
When one ranks all the preferences that were included in the survey, the structured types of training that possess the highest degree of 'trainer control' (training centre, OJT delivered by a trainer) were most preferred.

To some extend the respondents' emphasis on 'trainer control' is not in line with their learning style. The findings indicate respondents possess a certain ability to monitor their own learning process (self-directed learning), to solve work problems independently and to carry out activities focusing on acquiring and applying knowledge. These latter findings suggest respondents possess a learning style that enables to attend to self-study programs. As Grow (1991) stated, becoming a self-directed learner requires learning experiences wherein trainees experience they are able to take over the control for their own training. A careful introduction of CBT and additional trainer support in the first stages of the CBT might reduce the initial resistance against CBT.

The cluster analysis revealed that the time a respondent works as a desk clerk is linked with the preferences, the learning style and the appreciation of training conditions. In general, there is pattern that a longer career as a desk clerk results into a stronger preference for types of training programs with higher 'trainer control'. A possible explanation is that desk clerks with a longer career had less recent experience with training and have less confidence in their own learning capacities. Furthermore, it is possible that desk clerks with a longer career have lost some interest and are only willing to participate if the training program meets very specific conditions. This implies a very careful introduction of training programs that make an appeal to learner control.

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A Case Study of Informal Learning in the Workplace

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The purpose of this study was to explore and describe the nature of informal learning in the workplace. The work behaviors of four front-line employees were observed by a participant observer during which time any events in which employees acquired new information were recorded. Structured interviews were conducted after the observations to probe typical, infrequent, and unusual learning experiences to gain a deeper understanding of these processes. Preliminary results of this study are discussed in this paper.

Many organizations invest sizable sums of money in formal training and development programs. The intent of these programs is to transfer specific information about employees' jobs and to transfer general understandings about the organization. It is believed that greater expertise in both of these areas contributes to successful employee performance. Historically, it has been assumed that employees acquired these two types of information through formal training and development experiences.

However, recent studies have found that employees learn as much, if not more, from informal learning experiences in the workplace as they do from formal training and development experiences (Rothwell & Kazanas, 1990). For example, Brinkerhoff and Gill (1994) report that as much as 90 percent of the new knowledge, skills, and beliefs that employees need to effectively do their jobs is acquired in the work setting rather than in formal training and development programs.

Informal workplace learning is characterized by unstructured, and often unplanned, experiences in which employees acquire job information and organizational information. Job information, as distinguished from organizational information, refers to the knowledge and skills that are necessary for performing specific job duties and tasks. In contrast, organizational information refers to general understandings about the norms, values, beliefs, and assumptions that define an organization and guide employee behavior. Examples of informal learning include events in which employees acquire new information by observing others do their work, by attempting to do new job tasks, or by asking co-workers about the norms of their work groups.

Although informal learning appears to be one of the most common ways of acquiring information, few empirical studies have investigated the nature of this phenomenon. In particular, little is presently known about how or why employees select certain sources of information and methods of learning to acquire different types of information.

It is not contentious that employees at all levels of an organization, from managers to front-line employees, acquire information through informal learning. However, it appears that front-line employees engage in informal learning experiences more frequently than other employee groups (Drucker, 1988; Nonaka, 1991). Front-line employees are non-supervisory personnel who are responsible for performing the work of an organization. Due to recent changes in organizations and in business environments, the work of this group of employees is more knowledge-based, problem-oriented, and ambiguous than ever before. As a result, front-line employees must continually learn new knowledge and skills to effectively perform their jobs. One of the primary ways that they acquire new information is through informal learning.

Therefore, if organizations typically provide formal experiences for ensuring the effective performance and professional development of their employees, and if front-line employees actually use formal and informal experiences to acquire information about their jobs and organizations, then more must be known about the nature of the informal learning experiences that front-line employees use to learn new information.

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Purpose

The purpose of this study was to explore and describe the informal learning experiences of front-line employees. Specifically, the research questions that guided this investigation were:

(a) What types of information do front-line employees acquire during informal learning experiences?
(b) What sources of information do front-line employees use during informal learning experiences?
(c) What methods of learning do front-line employees use during informal learning experiences?
(d) What relationships exist among the types of information, the sources of information, and the methods of learning that front-line employees use during informal learning experiences?
(e) Do certain contextual factors influence informal learning experiences?
(f) Do certain personalogical factors influence informal learning experiences?

Learning the answers to these questions will provide an empirical base for developing workplace-based learning interventions that may be less costly, more effective, and more responsive than those presently used in formal training and development programs. Organizations could use this knowledge to modify their present training and development systems so that they are more consistent with the ways that people naturally learn in the workplace.

Methodology

The research design and sample, data collection activities, and data analysis techniques that were used in this study are described in the following section.

Research Design and Sample. This study used a case study approach to explore and describe the informal learning experiences of front-line employees in the workplace. An automotive insurance services organization located in Cedar Rapids, Iowa served as the site for this investigation. This company employs approximately 150 people, 85 per cent of whom are front-line employees.

Four front-line employees in this organization served as the participants in the study. These employees were selected by the management of the participating organization in conjunction with the researcher. Employees were selected in pairs. Each pair consisted of an inexperienced worker with less than one year of relevant work experience and an experienced worker with more than five years of relevant work experience. Both employees in each pair worked in the same department. One pair of employees worked in the Vehicle Services Agreement department and the other pair worked in the Document Control department.

Data Collection. A combination of direct observations and personal interviews were used to gather the data. A participant observer observed each of the employees as they did their jobs. Using data collection sheets and journals, the participant observer recorded and described any experiences in which front-line employees acquired new knowledge or skill. The descriptions included the types of information that employees acquired, the sources of information that they accessed, the learning methods that they used, and the worth of their learning experiences as perceived by the employees. In addition to documenting specific learning experiences, the participant observer recorded any other observed events and interactions among employees that she perceived as relevant to understanding the behaviors of the employees in the investigation. Each of the four employees was observed for four consecutive eight-hour work days. Thus, a combined total of 128 hours of work behavior for the four employees was observed.

In addition to observing employee work behavior, face-to-face structured interviews were conducted after each employee's four-day observation period. Interview schedules were constructed following the observations with the purpose of probing typical, infrequent, and unusual learning experiences to gain a deeper understanding of these processes. The interviews were conducted by the same person who observed each employee's work behavior and lasted an average of 45 minutes.

Data Analysis. Content analysis was used to analyze the data (Patton, 1990). This qualitative methodology involves identifying patterns, themes, and categories across participants

that emerge from inductively analyzing the data. Data analysis involved five main steps: (1) transcribe the information from the observations and interviews; (2) code the transcriptions by assigning categories to parts of the data; (3) analyze the coded data for consistent patterns, themes, and categories; (4) construct a typology to systematically organize the categories; and (5) determine the credibility of the findings by source and analyst triangulation.

Results and Conclusions

While analysis of the data was underway at the time this paper was submitted for the conference proceedings, preliminary findings show interesting similarities and differences between inexperienced and experienced employees in regard to the nature of their informal learning experiences. One similarity is that both employee groups acquired a variety of job and organizational information during informal learning experiences. Examples of job information included automobile dealer telephone numbers, insurance claim numbers, and customer mailing addresses. Examples of information that employees learned about the organization included recognition that quantity rather than quality is the dimension of performance most valued by the organization and that competition among members of work groups is a primary means by which the organization attempts to motivate its employees and increase productivity. Another similarity between inexperienced and experienced employees was that they used similar sources of information and learning methods to acquire certain types of technical information. For example, both employees in the Vehicle Services Agreement department used information manuals to look up automobile parts numbers, although it is interesting to note that the experienced employee customized the department's manual for his own use so that he could locate information more efficiently.

However, the findings also indicate that the nature of informal learning experiences for experienced and inexperienced employees is different in three important ways. First, the two groups of employees acquired different amounts of job information, with inexperienced employees acquiring more of this kind of information than experienced employees. Second, the specific nature of the information acquired was different, with inexperienced employees acquiring more facts and procedural information than experienced employees. And third, inexperienced and experienced employees tended to access different information sources and use different learning methods when acquiring organizational information.

A final paper containing a comprehensive report of this study's results, conclusions, and implications for professional practice and future research in HRD will be presented at the annual conference of the Academy of HRD in February/March, 1996.

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Expanding Formative Experiences : A Critical Dimension of Leadership Deportment

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Leadership deportment should no longer be attributed to gender, rather it must be attributed to the influence of formative experiences. In this discussion, formative experiences are defined as that which is perceived to be common sense from one's early development. Research suggests that traditional female socialization experiences promote participatory leadership skills; whereas traditional male socialization does not. Therefore, leadership development interventions should focus on evolving new common sense behaviors for both genders.

Participative Leadership, as defined by Daft (1994), "means that the leader consults with his or her subordinates about decisions. Leader behavior includes asking for opinions and suggestions, encouraging participation in decision making, and meeting with subordinates in their workplaces. The participative leader encourages group discussion and written suggestions" (p. 494).

Burns refers to the engaging activity mentioned above as Transformational Leadership--leaders and followers raising one another to higher levels of motivation (Rost, 1993).

Likert, similar to Daft, labels Participative Management as key policy decisions being made in groups by consensus (Burke, 1992). Rosener (1995, pg 31) concludes that "interactive style involves managing in a collaborative rather than top-down fashion."

Cast the labels aside and the issue being discussed is leadership facilitation of the interaction of organizational members for the betterment of the workgroup and or workplace. A superordinate debate revolves around appropriate leadership style for the rapidly changing environments and attendant evolution of participative workgroup strategies. We believe astute organization leaders need to maximize the collective energy of these groups. Our bias, supported by current literature, is that leaders will be most successful when embracing a participative, interactive leadership style. However, our discussion in no way denies the utility and contributions of other leadership styles.

Our premise is that in truly participative workgroup environments, this contemporary style of choice should be utilized by all leaders--men and women alike. In addition, we suggest that the so-called gender-specific behavioral frameworks, which some label as biased, have prevented scholars of leadership theory from accepting the Participative Style as gender-neutral. Our discussion will focus upon the influence of early formative experiences upon leadership deportment, and how this transcends the gender bound paradigms of traditional leadership theory. For the purpose of this paper, formative experiences are defined as that which we perceive to be common sense based on early development experiences.

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Gender-Specific Behaviors

A brief background of gender-specific behaviors is necessary before proceeding with "wiping the slate clean" and replacing the existing frameworks with that of a contemporary gender-neutral behavioral framework.

Male-Specific Behaviors Contemporary leadership theorists suggest male leaders predominately use a "Command-and-Control" style. This style is touted as suitable for hierarchical organizations--structures which are associated with paradigms of the past. Daft suggests that "Masculine qualities such as aggression, assertiveness, rational analysis, and competitiveness grew out of male-dominated military and sports traditions" (p.30). Others postulate that men have a task-orientation based on socialization grounded in competitive activities all of which encourage achieving power and gaining authority. Most modern leadership theories describe the resulting leadership deportment using terms as; telling, controlling, demanding etc . . . .

Female-Specific Behaviors Current research suggests that traditional female socialization was based on home and family experiences resulting in mature human interaction skills. "Feminine qualities such as openness, encouragement, understanding, sensitivity, and consensus-building..." (Daft, p.30), prepared women for roles exemplifying these skills ie; wives, mothers, volunteers, teachers and nurses. Today, however, these qualities have led to the desirable behaviors which facilitators and coaches possess. We suggest that these skills are necessary for success in the flattened organizational structure of the 1990's which are characterized by synergistic workgroups. Most leadership theories would describe this resulting leadership deportment using terms as; coaching, facilitating, understanding etc .

A contemporary leadership argument is whether men or women are more effective leaders. The argument focuses upon comparing and contrasting of traditional descriptors for male or female behavioral tendencies within various popular leadership models. Our perspective on this traditional argument is that the focus of the argument is misdirected. The focus should not be on gender, but rather on the influence of formative experiences upon leadership deportment--gender aside--for participative workgroup situations. Thus, the crux of this leadership debate is the issue of which set of formative experiences when actualized in leadership is considered best.

In the male and female scenarios presented above, displayed behaviors which when reinforced, evolve into accepted common sense behaviors by the individual. Common sense behavior is defined as that which is common or seems natural to an individual. One's formative experiences undergirds common sense which influences an individual's behavior throughout a lifetime. These behaviors constitute one's leadership style. However, the common sense behavior which seems common to one is not always common to another. Perhaps here lies the answer to the argument. It would seem appropriate for men and women to broaden their range of leadership development experiences to include those shaping influences which foster the embracing of that which is not common or natural.

Rosener (1990), cites that "the first female executives, because they were breaking new ground, adhered to many of the 'rules of conduct' that spelled success for men" (p.119). The second wave of female executives, however, are successful because they have abandoned male-dominated behaviors in favor of their own female-oriented behaviors. (Rosener) Whether women have truly abandoned the male-specific outcome behaviors is not up for discussion. A more valuable consideration is the evolution of an individual based upon a broader inclusion of cross-gender experiences which undergird and foster those formative experiences we believe important to developing the participative leadership abilities in males and females alike.

Participative Leadership Patterns

Literature suggests that effective leaders of today's participative groups portray characteristics commonly attributed to formative experiences of female leaders. Some of the qualities made reference to by successful leaders are Encouraging Participation, Sharing Power and Information, Enhancing Others' Self-Worth, and Energizing People (Rosener). These qualities are grounded in the types of developmental experiences considered common in early female socialization. In contrast, if an individual's developmental experience--gender aside--is akin to a traditional male (as previously discussed), they would have difficulty exhibiting leadership which advocates participation in decision

processes when their common sense suggests individuality works best.

With any workgroup--participative or otherwise--symbolic leadership style gestures do not work because such facades are difficult to maintain when they are in contrast to the basic formative experiences of the individual. This suggests that above all, it is vital that one leads with that which is common, or has become common, through their individual developmental experience. However, dominant participatory leadership qualities (such as coaching, facilitating, encouraging etc.) as stand alone behaviors do not spell success in the participative workgroup environment. In order to be successful, it is vital to utilize effective communication and interpersonal skills to sustain , support, and deliver effective leadership.

Communication Skills Traditionally and historically, the literature categorizes communication characteristics according to gender. This schema has judged females as effective communicators and males as ineffective. We believe that to best benefit from the discussion of the communication literature we need to continue to depart from the gender-specific debate. Rather, we suggest eliminating positive and negative gender-specific references by viewing effective communications as a function of the evolution which results from an individual's formative experiences. Communications skills considered here consist of verbal, non-verbal, and interpersonal.

Studies by Hyman and Case, cited by Bass, promoted women as better communicators (1990). The female communication style up to this point has been touted as personal and facilitative, whereas the male communication style was labeled assertive and authoritative. Linguistics professor Tannen suggests that certain communication styles may be more appropriate for participatory leaders. For example she refers to a boss who needs a report from a subordinate immediately. "The stereotypical male response would be, 'have this on my desk by the end of the day.' The stereotypical female would be more likely to say, 'I'm sorry to rush you, but do you think you could have this for me by the end of the day?'" (Fierman, 1990, page 118). Tannen would suggest that the leader who has developed effective communication skills and participatory leadership behaviors might say: I appreciate your doing this, I really need it by the end of the day. (Fierman, 1990)

Bass also noted studies by Hall and Halberstadt that found women to be superior in encoding and decoding non-verbal cues (1990). The successful knowledge of, and use of non-verbal communication is a critical dimension to effectively communicate with others.

The interpersonal component of communications is fundamental to the success of participatory leaders. As in other debates, gender continues to be the qualifier in the discussion. For example, Bass cites studies by Deaux, Eskilson and Wiley which suggested that women are more likely to seek interpersonal success in groups whereas men are more successful in task accomplishment (1990). A study by Vinacke stated that when allocating resources, women focus on maintaining harmony whereas men concentrate on individual performance (Bass & Stodgill).

We suggest that these communication dimensions; verbal, non-verbal, and interpersonal, are grounded in early formative experiences. We further believe that leadership style is evolved from common sense experiences--gender aside--which occurred during an individual's formative periods.

Summary

Our discussion has been framed by the leadership needs of participative workgroups. This includes positive aspects of participative management and studies which have indicated differences between genders when comparing effective leadership behaviors. Our first suggestion, based on existing research, is that traditional female formative experiences ground effective participatory leadership skills. Secondly, we suggest that early socialization provides individuals with their formative experiences--frequently referred to as common sense.

Our third suggestion is that either gender could benefit from the results of experiencing the traditional female socialization. The consequences of this socialization are behaviors which influence participative leadership style abilities. As such, we believe that men are able to be effective participatory leaders when their socialization experiences include ones similar to those traditionally attributed to females. Lacking the opportunity to have the formative experiences of traditional female , the focus of leadership development interventions should be on creating contemporary common sense behaviors.

We propose that leadership deportment should no longer be attributed to gender; rather, it must be attributed to the influence of an individual's early formative experiences. These formative experiences must be characterized by a socialization process which encourages, openness, understanding, sensitivity, and consensus-building --all of which contribute to the contemporary participatory leadership style.

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Mentoring and Reflection: Enhancing Managerial Skills

Susan R. Meyer
Training by Design

This descriptive, impressionistic study of self-report data about mentoring in relation to managerial development consists of analysis of mid-cycle and end-cycle structured telephone interviews with two groups of mentors and protégés in an eighteen month mentoring cycle. The mentoring program was designed to enhance professional growth in the context of a management development program consisting of ten to fifteen days of training over a two year period.

This paper describes mentoring relationships over a three year period. It presents anecdotal data gathered in a series of interviews with individuals at the midpoint and the end of mentoring relationships. The data is individualistic and self-report; it paints a picture of what kind of learning went on in these mentoring relationships and what conditions supported that learning. Areas addressed in the analysis included: looking for evidence that mentors and protégés felt that mentoring increased or enhanced the acquisition of knowledge about how to be a better manager; looking for evidence of the conditions of a reflective practicum; and looking for reported learnings that correlated with Sternberg's description of executive or managerial knowledge.

Program Overview

The Mentoring Project at the New York City Department of Personnel was designed to encourage reflective practice and the sharing of tacit knowledge as a way of developing what Short calls a "culture of experts." The goal was to enlist a cadre of experienced managers who would make their thinking process accessible to newer managers, facilitating self-reflection and heightened awareness of the unwritten principles of good management. The stated purposes of the program were to help new managers: transfer skills learned in training to on-the-job applications; gain job-related support and career guidance; and feel supported in making a long-term commitment to City government.

The study described in this paper was conducted both to monitor the on-going progress of mentor-protégé relationships and to gather long-term data to better establish and understand the link between mentoring and increased managerial skill. Two groups of mentors and protégés were tracked for this project. Of the first group of 55 paired senior and new managers, 39 pairs remained intact through the 18 month cycle. Of these, 32 could be contacted for interviews at mid-cycle and 25 at the end of the cycle. This data was combined with interview data from 28 of the mentors. In the second cycle, 30 of 37 pairs considered themselves to be intact, although the interview data suggests that many of these pairs were no longer meeting on a regular basis. Of the total number, 25 pairs were interviewed. The same questions were used for all interviews, but the first and second cycle interviews were conducted by different individuals. Questions fell into six categories: timing (frequency of meetings), topics discussed, perceptions about the quality of the relationship, what was learned, evidence of reflection and/or analysis of managerial style/practices, and overall assessment of the process. Data collected over the two years has been analyzed by cycle and as an aggregate. Data was grouped in categories

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representing similar responses to determine trends among mentors and protégés. Interpretation was informed by the literature on mentoring and the concepts shaping the design of the program.

Participants in this program were enrolled in a managerial certificate program that offered 12 - 15 days of training over an 18 month period. Candidates were screened, then matched with executive-level managers. Mentors were initially selected from a list of attendees at an executive development program. The list was circulated among consultants who had provided small group facilitation for executive sessions. These consultants were asked to recommend individuals they thought were outgoing, clear about their roles as managers and able to share their management philosophy and skills. In addition, those interviewed to be mentors were asked to recommend colleagues who might be interested and good at mentoring.

Protégés were recommended by instructors and course managers at the end of the core managerial course. During the first cycle, they were interviewed by telephone. During the second cycle, a written statement of goals for the Project was also requested. The interviews served as the basis for selection and matching. The written statements, in some cases, amplified the interview data, but primarily served to screen out individuals who appeared to have a low level of commitment to the project. Matches were made, in general, on the basis of matching common areas of interest or responsibility and/or matching expressed developmental need from the protégé with expressed area of strength or expertise from the mentor. Most matches were same gender. During the first cycle, age and location were not strong considerations. During the second cycle, it became evident that geography was a more important consideration. The pairs were expected to meet once a month for one hour.

Several theories defined the Managerial Certificate Program and the Mentoring Project. The model for the mentoring relationship was developed to incorporate the reflective practicum as described by Schon as a vehicle for transmitting professional knowledge. Specific managerial learnings that might be enhanced through mentoring were identified in Sternberg's description of managerial learning and in Quinn's Competing Values Framework.

Learning to Manage Through Reflection

In organizations, individuals are routinely promoted to or appointed to managerial positions with no training. It is often easy to learn the work of the unit itself; staff traditionally teaches the new manager the work of the unit if the manager comes into the organization from the outside. The manager who has risen from the ranks has a clear grasp of the work, and has probably developed some good theories about how that work could be done better. Knowledge of the mission, goals and culture of the organization can be learned from others in the organization. The issue that concerned the Mentoring Project was who teaches that manager how to integrate this data and develop a personal style of management? How does the neophyte learn to "think like a manager"? The hardest things to teach new managers are attitude, style and judgment. These areas are best developed through processes that encourage the manager to be both observant and self-reflective.

Donald Schon(1987) describes the reflective practicum as the means of transmitting professional artistry -- the application of knowledge -- to the new professional. This process calls for individuals in dialogue to make tacit knowledge explicit. To determine if this was happening in the mentoring relationships, protégés were asked if mentoring enhanced the development of managerial abilities and responses were analyzed for evidence of reflective thinking. Responses like those below indicated that there was evidence of reflectivity in the mentor-protégé interactions:

> Teaching me something ... feedback makes me look at myself - develop understanding. A manager is like an artist - a good one has skills and they can be brought out - all I'm doing is bringing out potential ...

> I guess I started to wonder whether I have left behind focusing on supervising a staff and grown in to managing toward department goals. There's a difference between supervising and managing, you know.

It was initially thought that mentors and protégés could be brought together with minimal preparation to engage in reflective dialogue. As most of the mentors reported that they had been mentored or that they had learned from observing and discussing work issues with their role models, one initial assumption was that the skill of mentoring came naturally to outstanding managers. Analysis of first year responses demonstrated that there was some indication of reflective processes:

> One important thing that I learned is to be more objective in my viewing situations, to look at more than one angle.
>
> I think it's just to kind of describe a situation - help me sit back and look at the broader picture - help me not get so stressed, but look at things from the other perspective.
>
> It's about having an objective person to talk to. It gives (you) the opportunity to step back and look at a situation from the outside. By going back, I realize things that I wouldn't have realized before.
>
> I've been able through his guidance to step outside of my function and to assist in getting the work done. He has helped me to focus on an intellectual and detached level so that I can change things for the better.

The project team felt that the concept had not been clearly understood by many of the mentors. In the second year, a more thorough orientation addressed this issue by substituting coaching metaphors for the term reflective practicum and by providing examples of our expectation for this kind of behavior. This increased the number of participants who were able to cite examples of reflection on or analysis of managerial practices. The second group most often used the words "sounding board" to describe the nature of their relationship:

> I used her as a sounding board - bounced ideas off her. I've learned to have more confidence in what I do here.
>
> This example clearly indicated one outcome we hoped for - that in discussing management concepts and ideas, the protégé would begin to trust their own instincts and abilities. Other responses indicated protégés struggling to better understand their own practice:
>
> He shares his criticisms as well as his positive comments about my qualities as a manager. ... it seems to be complementary. It has a dimension where things are out in practice - kind of a practical level in which I can reflect on.
>
> ... reflecting on what you've done - it's a critical basis (on) which I can better evaluate myself.
>
> Most of the learning you do is through experience, and if you can share it with people so that they don't have to go through it, then it would be worth it.

Although one mentor had difficulty seeing idea-testing as fundamental to the mentoring process, he seemed to use the concept:

> I served more as a sounding-board rather than as a mentor or advisor.

Another appears to be discussing, with difficulty, the concept of making tacit knowledge explicit in this response to a question about what his protégé learned:

> I've done a lot of mentoring of younger staff people. Um ... maybe non-transferable (parts) of my experience. People have to approach issues in their own way.

One on-going struggle in the program is underscored by these responses. The goal of creating a reflective practicum was a strong one for the project manager, but was neither clearly articulated nor bought into by participants. When the concepts of coaching and reflection fit the mentor's own concept of mentoring, there was a higher level of implementation. By the third year, it became clearer how to explain Schon's concepts in ways that better fit the thinking of the mentors and also how to select mentors who were more likely to experience success in using the model. Unfortunately, the program was disbanded before data could be collected to evaluate change in this area.

Managerial or Executive Knowledge

Sternberg's (1988) analysis of managerial knowledge provides a list of specific skills that can be roughly categorized as problem-solving, decision-making, knowledge about self and environment, knowledge about staff capabilities and needs, judgment skills, and situational analysis skills. Some of the responses to the question, "What did you learn?" reflect Sternberg's classification. These include:

Balancing short-term losses or inefficiencies against long-term gains:

> I guess that hard work and a serious desire are needed to succeed in the City - that getting the job done is the issue, even if it means cutting corners.

Seeking to understand things from other points of view:

> One important thing that I learned is to be more objective in my viewing situations - to look at more than one angle.

> (I learned) that there are several ways in City government to achieve the same goal.

> You're so overwhelmed with day-to-day responsibilities and she gave me a better perspective about work. She allowed me to see the bigger picture.

Knowing the capabilities, interests, and values of those with whom you are working:

> Productivity in the City requires different approaches. What does personnel look at in recognizing people? ... I think the main thing is how to deal with public personnel

> How to plan better - how to encourage people to discover new skills.

> You can't treat everyone the same - in particular a new hire.

Finding ways to get around your weaknesses:

> I learned to keep a record of things to do for employees and put it in writing. I also learned how to keep a list of what to do, what has and hasn't been done and what needs to be done.

Knowing what you need to know and what you don't need to know:

> Learning insights like organizations, projects - the higher person in the structure is less likely to know what is going on: things that the executive doesn't have control over ... information is sometimes withheld from you and how you want to deal with that. I've been trying to understand what my boss wants. I ask questions when it's needed.
>
> ... there's a difference between knowing and having the knowledge of what's applicable

And finally, a learning that seems directly related to any environment of reengineering, downsizing, and political hirings and firings - ability to cope successfully with the novel or unexpected:

> how not to give up in a pool of sharks.

There was also evidence of increases in perceived managerial competence:

> As far as my staff goes, ... I believe it helped me to better approach people at a lower level - I'm much more attuned to having them give me their ideas.
>
> I had a tendency to - with abrasive type employees - to back off and get around situations without involving them. ... Another thing is how to deal with the inadequacies of my management - what I feel is lacking.

Other participants were able to cite examples of managerial learnings that reflected Quinn's eight managerial roles (facilitator, mentor, innovator, broker, producer, director, monitor and coordinator):

> ... reorganization and looking at people and how to reallocate work. ... My own function as a manager, how I organize my work.
>
> Well, the biggest issue is productivity. ... We've been talking about how to get people to focus - to work... We've been discussing empowering, getting people to work. ... I'm also interested in ways to reward staff.
>
> I think I learned how to negotiate better - how to see the other side's view and use it to your advantage.
>
> I was having a problem with monitoring people's work. He told me that he gave his people time frames ... and I know that sounds pretty simple, but sometimes it's things like that that really count.
>
> How to plan better, how to encourage people to discover new skills. You can't do it all, so the best way to delegate is to give them a time frame to determine if they meet your expectations.

Other topics reported included more general learnings. These ranged from general ideas about management to a better understanding of management in a politically charged environment. Because the project spanned a mayoral election and the subsequent shuffle of agency heads, politics were a recurring theme.

> A lot. A handle on the truth - and the truth is that there are no magical solutions. Most of the time, logic can prevail in most situations. It's important not to be stuck by the rules and regulations.

> Mentor: He asked me how a person actually takes command of a large scale command, in practice, not in theory. Like what qualities were important in picking a subordinate. He got responses in writing from me.

> Usually, we just go over, update each other on our workplaces. We'd zero in, perhaps, on a problem or a particular situation - like she had to make the transition to manager in a department where she'd been a colleague. We kind of tracked her progress ...

> How real-world government decisions get accomplished. I guess how pressures and constraints in City agencies are similar.

> I understand better the inner workings and dynamics of City agencies - the relationship between career professionals and political appointees. That understanding is due to my mentor. I understand why things happen and do not happen.

> The current situation in government. The election, economics, the bureaucracy and whether it helps or destroys agencies working. It's important to have someone who knows what they're doing and can reflect the goals of the agency. Also about aspects of life working at an agency.

Linkages and Application

Since the Mentoring Project was designed to improve managerial skills, it was important to look for evidence that protégés were able to make connections between mentoring and Certificate Program courses and were able to apply knowledge from both sources to their day-to-day functions. About half of the protégés with intact relationships in both groups were able to cite examples of linkages or application:

> I find instead of just taking courses I began putting things in action after speaking to him about the course. I tend to put things in action instead of just thinking about it.

> My mentor has a lot more to do with enhancing my current job assignment than the Certificate Program itself. It is a good way to maintain continuity in addressing management issues.

> I foresee that he is going to become more valuable to me. I'm going to produce more with less people because of his help. I'll be able to look at individuals doing the work - he's teaching me to look at the individuals doing the work.

> The learning insights and the applied concepts - it provided me with management concepts that needed to be applied to work.

> I've tried to incorporate some ideas in my unit. I'm growing and have a better attitude about what I do.

Recommendations for Successful Mentoring Programs

In formal mentoring programs, it seems that the greater the structure, the greater the comfort level and freedom of interaction. There should be a clear mission or goal for the program and this goal should be clear to mentors and protégés. Program goals should be set at as high a level as possible in the organization. Although mentoring is a highly individualized process, there are overarching concepts and governing principles that can and should be in place as the program begins. One early mistake in the DOP program was the notion that the mentors would "get it" and naturally fall into the role. Over the three years of the program, there was a constant cry for more structure. In retrospect, measurement tools as well as orientation to the role and structured guides for thinking about work should be in place at the outset.

Selection Tools Selecting individuals who have a high probability of success in mentoring or being mentored can be very difficult. Individuals who make good mentors are those who can easily share their perspective about work. This means both being able to talk freely about their own work and being able to listen to the protégé's discussion of work situations and conducting a discussion of discovery rather than providing solutions. Managers whose reputation is primarily for "making things happen" do not make the best mentors. When they can no longer directly or indirectly intervene on behalf of their protégés, they become bored with the process and want to move on to something they can fix. Previous mentoring experience and referral by those who had been successful mentors proved to be good selection devices. Most successful mentors were able to identify other managers who had abilities or styles similar to their own. All potential mentors were interviewed. This information proved useful in making matches, but was not as useful in measuring mentoring potential. A tool developed by Lois Zachary that provides for self-assessment in a set of skills important to the mentoring process might be more useful.

Structured Interviews Use of structured interviews helped to maintain focus throughout the mentoring relationship. Some mentoring conversations will center around providing the protégé with specific information; another expectation is that there will be an on-going reflective dialogue. Structured interviews help maintain this aspect of the relationship. Through a series of how and why questions, they set up a reflective cycle for thinking about work This should become internalized and part of the protégé's on-going thinking about their work.

Journaling Journals can be used to start a discussion with the mentor or to clarify a particular problem the protégé is working on over time. Taking a few minutes to write about a process helps the protégé increase his or her analytic abilities and powers of observation. It assists in recall for discussions about process. O'Brien (1995) suggests taking a few minutes each day to keep a journal about important issues. Patterns in the journal are excellent reference points for discussions with the mentor. The process of keeping a journal also helps the new manager remember what went on during the day - to slow down time long enough to observe.

Tracking Participants in structured mentoring programs should be monitored periodically. Towards the later part of the program, this serves as a reminder to those who are lax in holding to their meeting schedules. It is the best early alert system for relationships that may not be working out. It provides an easy way to get information about the current concerns of mentors and protégés. In this respect, the interviews are formative evaluation, providing suggestions for seminars or other enrichment activities.

Seminars In a long mentoring program, periodic meetings and seminars help sustain interest over time. They also serve as an incentive for participation. Often, senior level executives in a large organization do not have a lot of contact with their peers outside of their own area. Seminars allow these executives the opportunity to network with each other. They also provide a chance to introduce protégés to a wider range of contacts. In addition to large

seminars open to all mentors and protégés, smaller focus groups provide the opportunity for free discussion among several mentors or protégés.

Issues specific to public sector

Some issues in the creation and administration of a mentoring program that arise in this example are peculiar to government. The stability of the program, for example, depended on support from high level government officials. Similarly, the pool of available mentors was affected by shifts in government. Traditionally, the pool of executive managers from which the mentors were drawn consists of people appointed to their positions. When the mayor changes, agency heads also change, and the executive managers, who serve at the pleasure of their agency heads, may shift positions or move out of the government loop. This presented some special challenges in terms of maintaining continuity. Mentors were asked to keep their protégés advised about their status. If the mentor remained within government, they were asked to continue meeting with their protégé after they relocated. If they were leaving government, one final meeting was suggested so that the relationship had some degree of closure.

Another unique aspect of this program was the professional relationship between mentor and protégé. In most formal, in-house mentoring programs, mentors and protégés are from the same unit or area. They are at least from the same organization. In this program, however, the government was viewed as a whole. This meant that the only employment connection between mentor and protégé was that both were municipal employees. Mentors and protégés were never from the same agency. This made finding commonalities of interest more difficult. It also reduced one of the main incentives for mentoring - the ability to involve one's protégé in one's own projects or to groom someone for succession in a specific department. Instead, we relied on altruism as the single strongest motivator - managers who felt that government had given them a lot and who wanted to return something to the city.

Conclusions

The study provided rich glimpses into the nature of the mentor-protégé relationship. It also raised many questions for future study. These include: whether or not joint goal setting and action planning would provide the additional structure requested by the majority of participants and whether or not this structure would more clearly codify managerial learning; what types of individuals are most likely to be successful as mentors and protégés; and how can the information gathered in this study be used to better understand how to encourage reflective practice.

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A Case Study of African-American Women's Corporate Leadership Experiences: Contextual Implications for Human Resource Development

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This ethnographic case study examined the subjective interpretations of corporate leadership experiences among African American women in entry and executive level management positions; described common themes to define leadership experiences; and investigated differences found among leadership positions, workplace context, age, and education. Using an ethnoscience methodology, a taxonomy was developed that produced correlate statements of adverse leadership experiences. It was concluded that the participants have adverse leadership experiences attributed to their gender and ethnicity.

The negative impact of ethnicity and gender upon an individual's education and employment experiences may be attributed in part to the ubiquitous nature of the European-American male ethic that dominates the values, standards, and beliefs for American society. The pervasiveness of this ethic on leadership attributes was examined through the review of the leadership literature.

Literature Review

Most leadership research has been generated from a male-exclusive platform. This traditional approach has resulted in a propensity toward leader selection of men or women who manifest male patterned prescribed behaviors. Shein (1973), Jacobson and Effertz (1974), and Deaux (1979) suggested that personality traits influence the selection or pursuit of leadership positions. Men are sought out for leadership. Women often do not take opportunities to exhibit leadership skills, nor are they usually given leadership positions unless men are absent. This illustrates a "blaming the victim" syndrome. Broverman et al. (1970), Haavio-Mannila (1972), and Shein (1973) characterized women as soft, yielding, dependent, and emotional, and leaders as aggressive, competitive, firm, and decisive. Blum and Smith (1988) viewed Hennig and Jardim's (1977), *The Managerial Woman*, as a narrative that was androcentric. They identified gender inequality in the workplace as the responsibility of women. Women needed to change themselves to succeed--dress for success, be more assertive. This change was necessary in order to deal with their past cultural experiences that served to inculcate traditional feminine personalities.

Low self-esteem (Deaux, 1979), low motivation (Rosen and Jerdee, 1978), and deficits in socialization skills (Terborg, 1977) present the negative perspectives of women when explaining women's unsuccessful attempts with leadership roles. The literature appears to reinforce women's responsibility in changing themselves in order to meet the male expectations for the successful pursuit of the leadership role.

The literature that directly addresses these racial differences between white women and African-American women as leaders is scant and incomplete. Most apparent during the review is that the direct influence the Eurocentric male values have upon maintaining major institutions of the United States under the leadership of white men. This value may be the prescriptive phenomenon that determines placement of individuals into leadership positions.

Scott (1985) cited the scant and incomplete picture regarding black female leadership studies. She emphasized the need for more ethnographic studies of communities, church and civic groups, as well as families, to determine how leadership emerges and is taught. Published findings from leadership studies of women failed to mention whether or not black women were in the sample studied.

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Because of the changing organizational context of the workplace, there will be an increase in women, older workers, and minorities to meet the production demands of corporations. Through an ethnographic study of African-American women, an understanding of the relationship between the dualism of inequity and adverse leadership experiences could be examined and described by investigating the problem: How do African-American women experience leadership?

Purposes of the Investigation

In an attempt to offer rich insights into the commonalties and unique leadership experiences of selected African-American women in corporate leadership positions, this ethnographic investigation:

1. examined the subjective interpretations of leadership experiences.
2. described common themes that would offer an explanation that would define leadership experiences.
3. examined any differences found among leadership positions, workplace context, age, and education and leadership experiences.

Selection of Participants

Twelve African-American women in leadership positions within a corporate arena were purposively selected by the hierarchical description of the corporate management structure. They represented the entry level (Group A) and executive level (Group B) of management. All were full-time employees whose tenure of employment falls within a time range of eight to twenty years. The ages of the women were within the range of 33 to 56 years.

There were six participants in each case group. In order to ensure an equal distribution of participants in each group, two of the six participants included in Group B had to be selected from two different corporations. This was due to the lack of African-American women available in any one corporation at the executive level. All participants in Group A were selected from the same corporation.

Data Collection

Interview data were collected by the primary investigator in the role as participant-observer, using an open-ended, unstructured interview. The interview process for each case consisted of five phases.

> *Phase 1:* Contact the corporate site to schedule investigator orientation, obtain participant names, and setup interview appointments.
> *Phase 2:* Conduct Part One and Part Two of the open-ended, unstructured interview.
> *Phase 3 and 4:* Encounter sessions 1 and 2. Communicate with each participant by phone seven to ten days following completion of Phase 2 in order to review any job-related incidents that they may have encountered since the last interview contact.
> *Phase 5:* Group dialogue. All Part 2 interview questions are repeated, providing an opportunity for the women participants with the primary investigator who, as an active participant, facilitates the sharing of personal views and responses to questions.

Demographic information pertaining to leadership position, workplace context, age, educational level, marital status, and dependents were obtained as a component of Part One. All data were collected, over a four-month period during the months of September, October, November, and December.

Reliability and Validity

To ensure accurate and thorough accounts of the interview, conversations were tape recorded with permission of the participant. Participants' ideas were also restated during the interview to confirm data. Additional validation of the interviews was confirmed by re-checking data from typed transcriptions of the tapes and replaying of the tapes. Group job descriptions and corporate policy and procedures provided a foundation for understanding observations and the events selected for observation. Encounter Sessions #1 and #2 offered spot checks on specific responses to ideas that were not confirmed during Phase 1 and Phase 2. Phase 5 offered an additional confirmation of responses that provided another means of reaffirming the convergence of descriptive or emic data.

Analysis of Data

An ethnoscience method was used to analyze the data. This approach focuses upon eliciting and classifying emic data by getting figuratively "inside the world or the mind view of the people" (Leininger, 1985: 240). Common themes are identified, classified, and ordered into categories as domains of inquiry. Participants' statements and categories have meanings and were analyzed individually and collectively to determine similarities and variations in group-shared cognitive knowledge (Leininger, 241). Tables were developed to organize the taxonomy and its underlying descriptive themes.

Following an extensive examination of participants' actual transcribed responses to the taped interview, any similarities or differences in their use of language and phrases when describing their experiences were examined. From these data (emic data, that is derived from the informant's actual words, rather than etic data that is derived from an outsider's interpretation), the taxonomy that included the domains of inquiry, segregates, low-level abstractions that describe the domains and substatements, additional informants' words that further described the segregates were identified.

The segregates represented the leadership themes that were derived from analysis of the actual words of the informants. These words were obtained from actual transcriptions of taped interviews. Verification of the segregate statements is found in the subset statements. This approach provided the phenomenological explanation of the segregates, using an abductive approach (Stanage, 1987). Because of the volume of the written material, providing dates, times, and page numbers as references from the transcriptions would have been a tedious effort.

Isolation of this taxonomy allowed the formulation of themes about African-American women's leadership experiences from a low level of abstraction, descriptive statements, to a high level of abstraction, generalizations, and correlational statements about the domain (hierarchical management levels). Correlation statements--called correlates--were identified to provide a rich description of the essence, characteristics, and leadership experiences of African-American women.

The themes emerging from the taxonomy included statements describing five domains of inquiry: marginality, education, job responsibility, mentorship and relationships. Tables 1 & 2 illustrate the analysis of Leadership for the domain, marginality for Group A and Group B.

Table 1. Analysis of Leadership Group A

Domain: Marginality		
Low Level Segregate Abstractions		
Segregate	"They looked me over"	"I know how the game is played"
Subset	1. Prove self • Suspicious • Don't think I can do the job • Take all your ideas • Right place at right time	1. Mentoring • Adapt to diversity • Make it on your own • Develop corporate thinking
	2. Need more blacks • We're in competition with each other • Be persistent • What I need to get there faster	2. Good ol'boy mentality • No equity • White male dominated system • Few blacks to work with or manage • We are not going away

Table 2. Analysis of Leadership Group B

Domain: Marginality		
Low Level Segregate Abstractions		
Segregate	"Validation and re-validation"	"I know how the game is played"
Subset	1. Two-sided expectations • Looked at through filter • Bar extra high • You've got to be better • Proving up • Don't trust the system	1. Reservoir of strength • Position of strength • Not taking no • Tremendous drive to learn • Keep teaching them • Strong psyche
	2. Need more blacks • We're in competition with each other • Be persistent • What I need to get there faster	2. You can't opt out • Be polite • What's your nationality • I'ts discouraging • Keep doing it

Marginality

Marginality reflects the participants' perceptions of discriminatory or inequitable treatment. These women described experiences that may be attributed to a dominant European-American perception that African-American women can not measure up to or be equal to Eurocentric standards and expectations. These women, by virtue of their gender and ethnicity, have a marginalized relationship with their European-American co-workers.

Entry level, Group A participants, responded to interview statements in a more self-centered approach. Many of their comments addressed their personal encounters, reflecting more defensiveness and insecurity when reasons for their slow entry and promotion into management were discussed. The "majorities" were blamed for not recognizing their ability or potential, as confirmed by these statements: "They looked me over"; "We're in competition with each other"; "They don't think I can do the job"; "You need to be in the right place at the right time".

Unlike Group A participants, Group B, executive level participants, discussed more gender-related experiences and perceptions. This may be a circumstance of the workplace, since Group A tended to have fewer male employees, in particular, European-American male contacts. African-American women within the executive level spoke more to the societal stereotypes that cause their adverse leadership experiences and their responsibility for transforming the work environment by changing the perceptions of their European-American male counterparts. This is reflected in the following statements: "we see people as people"; "we must dispel the myths"; "we must keep teaching them . . . we can't opt out".

With the upward career mobility of these women, there was a greater isolation from their gender and ethnic group. As a result, they came in contact with European-American men who had limited professional interaction with women, African-American women in particular. All but one described experiences with overt racism and discrimination as they moved from one level to the next. The "validation and re-validation" they experienced at each promotion suggested a "filtering" system to test the corporate system for its reliability. Statements reflected views that the "corporate leadership did not trust the system."

Successes with upward mobility were not attributed to their abilities, but rather to "luck" or "accessing the system differently." These women did not fit the caricatures, "hands on hip black woman" that may be the European-American male perception. These men may not have expected "an educated Black woman who is determined, who is highly motivated, who is highly skilled."

All agreed that this validation and re-validation involved their "re-educating the new boss." Possibly, the European-American male in top management positions may not understand not only the social context of African Americans, but also that of other marginalized groups. Therefore, there may be inconsistencies in "choosing" those marginalized persons, African-American women in particular, for upward career advancement. An executive vice-president could not explain her selection for career mobility. She believed that there were other African-American women who were "just as deserving." This selection process may be a reflection of corporate management's inability to design objective criteria for selecting individuals for career advancement.

In examining the meaning of marginality for African-American women in this study, the investigator synthesized lower segregate classifications and themes into the following correlates. Although these are not conclusions for all African-American women, they do characterize these African-American women's leadership experiences with marginality.

These correlates are as follows:

1. African-American women in entry level management positions view the cause of their delayed entry into management as due to discriminatory behavior by European-Americans during job recruitment and selection.
2. African-American women in executive level management feel an obligation to educate their European-American co-workers to dispel stereotypic myths about their ethnicity.
3. African-American women in executive level positions tend to use non-threatening word phrases and soften their tone of voice during meetings with European-American men, so that they do not appear aggressive.

Implications for Human Resource Development Practice

The increasing diversity of the work force from groups that are mainly minorities and women, historically marginalized persons, validates the importance this study has for explaining leadership experiences of African-American women.

Any HRD professional who is studying executive development should recognize the importance of developing programs that assist interaction within and across population groups. Thus, HRD's role in designing strategic plans for educating corporate leadership that is primarily composed of European-American men is of great importance. For example, using one of the correlates identified for marginality, African-American women in executive level management feel an obligation to educate their European-American co-workers, in order to dispel stereotypic myths about their ethnicity. The HRD director can examine the perceptions of both executive leadership and African-American women to further explain this correlate. As a result, analyzed data that reflects employee social context can be used to identify learning needs, to design content, and to implement programs that increase employee sensitivity and, hopefully, understanding of diverse socio-cultural groups in the workplace.

Important to employee training and development is an awareness by the HRD unit of the impact that socio-cultural factors have upon both performance and learning in the workplace. Current HRD curricula may not provide courses of study that reflect socio-cultural diversity. Thus, HRD professionals may not have developed an awareness nor a sensitivity to the importance of the socio-cultural context of employees.

This investigation identified correlates that validate the importance of the social context of employees and job responsibilities. Perhaps the corporate movement toward a strategy for cultural diversity in the workplace may first occur through employees, such as the African-American women in this study. For example, the executive-level participants recognized the societal stereotypes that resulted in ethnic myths. Through the "validation and re-validation" experiences, they perceived themselves in an educator role to "re-educate the new boss" and "dispel the myths." Thus, corporations may be establishing their own educational approaches for cultural diversity, based upon the actions of employees. Possibly the corporate need for HRD experts will serve as the catalyst for university curricula change to include courses that emphasize the social-context of employees as a foundation for corporate development and education and training of employees.

Since HRD curricula in adult continuing education has had limited inclusion of the intellectual and socio-cultural context of such marginalized groups as African-Americans (Rosenthal, 1978), this investigation also provided a mechanism to interrogate (inquire), challenge, and unveil the prevailing assumptions and prescribed behaviors of the dominant European-American society, that has not only permeated public schooling, but has also provided the foundation for adult continuing education. Because this investigation was within the social context of African-American women, the investigator was able to generate questions as to the veracity of prescriptive standards that control the career mobility of African-American women within the corporate arena.

By creating knowledge through ethnographic investigations, the invisibility of marginalized groups, such as African-American women, can be eliminated (Hugo, 1990). A curriculum integration occurs, resulting in adult continuing education programs that attract and retain more minority students. From this base, more research is generated that will be reflected in ongoing enhancement of that ethnocentric knowledge base. By refocusing HRD programs on human experiences of employee groups, a key element toward a strategy for cultural diversity in the workplace has been initiated.

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New Management Roles in the Communications Industry

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The communications industry has been subject to radical changes in this decade. Managers working in this branch of industry need to adapt their management style to changing conditions. This study was carried out for the branch training and education institute to provide directions for their future training and education supply. Using a variety of research instruments (literature research, interviews, survey and expert conference) a new flexible curriculum structure has been developed.

The printing industry has traditionally been a relatively stable branch of industry. It had its own structures, it was relatively independent of other industries and developed its own technology. However, recent technological developments have radically changed traditional patterns in the printing industry both in the United States and Europe (Mandel et.al, 1993; PIRA International, 1994; GEA Adviesgroep, 1994). And although only a limited number of organizations have responded to those developments, it sure looks as though they are going to be permanent.

Those technological developments include digital printing, on-line publishing, short run color printing, printing on demand, CD-i, CD-rom, Internet as well as technological innovations in more traditional printing technology. Related to those are multimedia productions and information databases. Research and practice show that the most important changes for the printing industry will be the digitalization of information and the disconnection of information (text and graphics) and printed materials. From now on, information will be stored in large databases and will be distributed on demand through various kinds of information carriers, be it on-line, on CD or in print. As a result the traditional printing industry tends to merge with other branches like multimedia, publishing and advertising. Therefore we refer in this study to the communications industry, instead of solely the printing industry.

The developments, in particular the computerization and new efficient techniques, result in a declining need for low skilled workers and people on the work floor. On the other hand does ongoing computerization of existing printing technology also result in a need for higher skilled workers in informatics, computer science and telematics. At the organizational level customer relations are changing and international competition is forcing large as well as small businesses to focus on their future strategy in order to survive.

In general we distinguish three types of strategies to respond to the developments described above (GEA, 1994). Firstly the penetration strategy, which means that the organization continues to focus on a traditional market segment and adapts minimally to new technological opportunities. Secondly we see organizations that adapt gradually to the new changes. This is called the transition strategy. And lastly, only a limited number of organizations radically change their business and technology and adapt completely to new markets and innovations. This is referred to as the transformation strategy.

In this arena of changes and developments the manager plays a crucial role. Traditionally management tasks in the printing industry would include planning, organizing, staffing, controlling and leading (Koontz & Weihrich, 1988). But currently, this management approach is not sufficient anymore. Management in the printing industry needs a new dimension.

This study was aimed at exploring changing contents of managerial work in the communications industry in the light of recent developments, and moreover to develop a new training and education design for managers. The client of this study was the Dutch printing industry training and educa-

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tion institute. This institute offers several education programs which lead to well known certificates for managers in the printing industry. These programs consist of related units in a fixed structure and are offered in a two or three year format. A small part of their supply consists of in-company training and consultancy. Their primary concern was to obtain data about their target group so that management profiles developed by the University of Twente could serve as a concrete and valid basis for new education and training programs aimed at managers in the communications industry.

So far we have provided a context for the study. In the remainder of this paper we will describe the following elements of the study: the research questions, the methodology used, results of the different phases related to the research questions and a discussion of the combination of methods for information collection.

Research questions

The research questions for this study were: (a) which are the most relevant developments to affect managerial work in the communications industry, (b) which management tasks will change or be needed in order to perform effectively and innovatively, and (c) which education and training programs need to be developed for managers to be prepared for the changing content of managerial work.

Methodology

In this study we have focused on the changing management requirements. These requirements are affected by developments in the printing and communications industry. Because of the breadth of the research subject, we decided to approach the matter from different angles and through a variety of research methods. This way we would be able to formulate conclusions which would be based on theory as well as practice and on the views of experts as well as practitioners. Another advantage of this strategy was that through sequential ordering of the various methods we would be able to build on earlier findings and thus adapt the research process at the same time.

Literature search. Therefore we started with an international literature search to obtain information about recent changes in this branch of industry. A recent thorough study of the Dutch Printing Federation provided a useful frame for more detailed literature search. A few conference proceedings (Mandel, 1993; PIRA, 1994) about the topic gave us valuable insight in visions and strategies for the future of the communications industry. It also appeared that in several other countries, similar studies had been carried out.

Interviews. In the second phase of the study we reflected the findings of the first phase to several businesses in the Netherlands. These organizations had been selected because of their innovative attitude and experience with new technologies. Pioneer organizations are characterized by early adoption of new media, risk taking in exploring new markets and products and strong affiliations with customers and suppliers. We found five organizations that were willing to cooperate, and they provided useful information about the pro's and con's of new developments in practice. The data were collected by means of semi-structured interviews with key-persons within the innovative organizations.

Questionnaires. The third phase consisted of two mailed questionnaires among businesses and managers in the printing industry in the Netherlands. One questionnaire (n=2400) has been sent to organizations and focused on branch developments, size of the organization, main technology, future business strategy, products, and markets. Those questionnaires were completed by top management; 460 (19%) of them were completed and returned. The other questionnaire has been sent to individual managers (n=5800) within those organizations. This second questionnaire was aimed at describing their current and future tasks and some personal characteristics, like age, sex, education, additional training and their personal experience with new technology like internet, CD-rom, etcetera. Of this second questionnaire 752 (13%) copies were returned. Although these response rates may seem rather low at first sight, this has no consequences for the representativeness of the data. In fact many more questionnaires than were necessary were sent out, to be able to perform more detailed data analysis in

case of high response rates. The amounts of 460, respectively 750 respondents represent the businesses and managers very well.

Conference. The fourth phase of the study was a Dacum conference with regard to profiles and competencies of managers. Dacum (Norton, 1985) is a relatively quick technique to obtain job profiles, competencies and curriculum aims and plans. We invited 15 printing and communications experts for a two-day meeting to discuss the findings of the previous phases of the study. To provide all participants with the same entering knowledge about the subject matter, we compiled a comprehensive summary which was mailed to the participants before the start of the conference. This summary served as a common database during the conference. From this point we proceeded by distinguishing new roles and tasks for innovative managers in the communications industry. Each of the roles, seven in total, was described by means of tasks and other role characteristics. The participants also formulated required competencies for realization of each of the roles.

Curriculum development. Lastly, the results of all four phases were synthesized to develop a new structure for training and education and to offer suggestions for improvement of the existing education and training supply of the institute. This was done by mutual deliberation of both client and University. As such practical as well as theoretical aspects and study results were considered and included in a new framework design for management training and education.

Results and conclusions

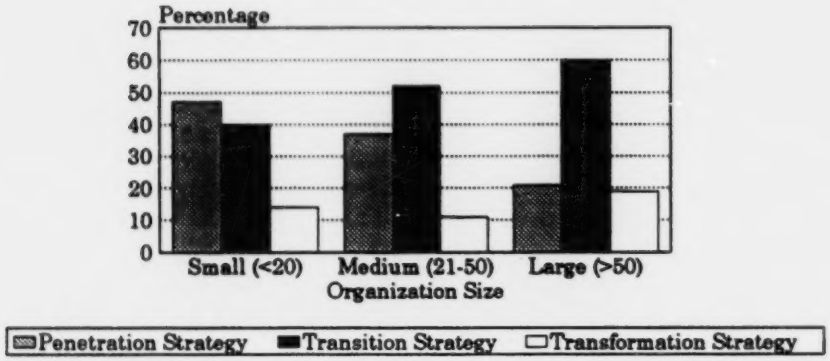
In this section the results will be described per research question. First we will discuss relevant developments that will affect future managerial work. Second we will address changing management tasks and roles, and third some remarks will be made about the new education and training structure.

Developments. The literature research showed seven main trends that will guide the future of the communications industry: (1) the printing industry will evolve from a closed and independent branch of industry into an integrated part of the communications industry; (2) the monopoly of the press has ended; (3) reallocation and substitution of printed matter by electronic media will continually take place; (4) the volume, composition, and manufacturing of printed material will change; (5) organizations will have to deal with increasing internationalization; (6) the need for less printed material will cause an increasing capacity surplus within the traditional printing industry; (7) environmental care will emerge as a competition factor. To respond to those trends, organizations in the communications industry will have to alter their way of doing business. This includes a mind shift from press to information and communication systems; a change of corporate culture towards new ways of leadership, management and communication; a different commercial focus which aims more at serving markets and customers in stead of products; strategic Human Resource Management and Development to enhance employee flexibility and competence; project management instead of product management; systematic use of process data; and use of advanced technology in both product and process. The interviews of phase two showed that pioneer organizations endorse those trends and that some of them already have adapted to them. In addition to financial investments, companies will have to invest in people. The organizations in the study viewed an inclining need for higher educated people, who need not necessarily be educated in technical or graphic domains.

As was mentioned before, we distinguished three types of strategies to respond to new developments (GEA Adviesgroep, 1994). Firstly the penetration strategy, which means that the organization continues to focus on a traditional market segment and adapts minimally to new technological opportunities. Secondly organizations adapt gradually to the new changes. This is called the transition strategy. And lastly, some organizations radically change their business and technology and adapt completely to new markets and innovations: the transformation strategy. The results of the questionnaires supported our earlier findings. It appeared that only a small percentage of the businesses in the communications branch has adopted a transformation strategy (figure 1). The larger the organization the more likely they are supporting a transition strategy. Small organizations seem to lack the necessary means to invest in new technology or do not have faith in the opportunities that adoption of a progressive strategy can offer: almost half of them adhere to a penetration strategy.

Management Tasks and Roles. The literature search showed an incoherent spectrum of views and approaches to managerial work, due to the succeeding views and theories in this field. Roughly speaking one can distinguish two approaches: functional tasks versus occupational roles of managers. Koontz & Weihrich (1988) have summarized the views of many authors on managerial tasks. They have made a very common division of main tasks: Organizing, Staffing, Controlling, Leading and Planning.

Figure 1. Future strategy and organization size in the communications industry



Other management experts view the work of managers through the use of roles (e.g. Quinn, 1989). Quinn distinguishes eight management roles: Innovator, Broker, Producer, Director, Coordinator, Internal Monitor, Group Facilitator, and Mentor. We decided to focus on tasks for the questionnaire phase and the use of roles in a subsequent phase. The reason for focusing on tasks first was that the theoretical role concept is relatively unfamiliar to managers in this branch of industry. Thus the third phase, surveying the organizations and managers, provided a more profound insight on the views of management about current and future tasks. This phase resulted in a main profile of most important future managerial tasks and added management profiles for large, medium and small organizations. To illustrate this we have depicted the five most important future tasks per organization size in figure 2.

Figure 2. Most important tasks per organization size

Organization Size		
Small	Medium	Large
• Cooperation with customers	• Motivating employees to strive after quality	• Stimulating (the will to) change
• Selling products	• Consultation with colleagues, superiors and employees	• Stimulating employees to attain goals
• Calculation of orders	• Maintaining existing customer relationships	• Consultation with colleagues, superiors and employees
• Motivating employees to strive after quality	• Cooperation with customers	• Motivating employees to strive after quality
• Quoting for new orders	• Remaining up to date with technological developments	• Internal consultancy

The fourth phase of the study, the conference about profiles and competencies, was oriented towards a different approach of management profiles, that is management roles. The participating experts viewed a traditional approach to management tasks as being a conservative factor in the development of better qualified managers. And besides that, all functional domains like Marketing, Human Resource Management, Internal Management, and Finance are being addressed by current management training and education programs. The change of approach, which is more or less aimed at innovation management, needs to be based on a shift of mentality. Therefore the conference participants decided to focus on roles of managers and formulated seven main roles. Those are (1) Producer; (2) Innovator; (3) Motivator/Coach; (4) Controller; (5) Integrator; (6) Spokesman; and (7) Strategist. The participants generated outputs for each role, as well as tasks and competencies. See figure 3 for an overview of the main roles and their ultimate output.
Those roles showed a resemblance to the roles described by Quinn (1989). The conference participants also decided to focus on the manager as an innovative entrepeneur to provide an overall role that should direct the design of new management training and education. It was felt that managers in all organizations at all levels should aim at realizing this concept within their own working context and at their own level.

Figure 3. Roles and outputs

Role	Role Output
Producer	Productivity
Innovator	Idea
Motivator/Coach	Targeted Activity
Controller	Management Information
Integrator	Synergy
Spokesman	Organization Image
Strategist	Mission, Strategy & Goals

Training and Education Structure. Through synthesizing of all previously found information a new training and education structure for management in the communications industry was developed. the results of the literature search were validated during the following phases and could therefore serve a reliable source of information about current and future development to affect the communications industry. All synthesizing activities were continuously compared to these developments. The next step in the process of curriculum structure development was the determination of core competencies that emerged from the role descriptions. Those more general competencies (valid for all managers in all kinds of organizations) provide implicit knowledge domains. The results of the questionnaires were used to obtain more specific and detailed information about those and other competencies and the knowledge domains to match. The foregoing resulted in a scheme in which all roles, outputs, competencies and knowledge domains were described. Figure 4 shows an example of the role of Innovator.

Figure 4. Role - Competencies - Knowledge Domain Scheme

Role & Output	Competencies	Knowledge Domains
Innovator realizes renewing ideas	• Can carry out strategic explorations • Can think independently: can follow and initiate creative developments • Can make strength/weakness analyses of the organization, related to current organization developments • Can develop, implement and evaluate strategic scenarios	• Innovation Theory • Intervention Theory • Systems Thinking • Creative Thinking • Network Learning • Communication Theory • Scenario Technology • Implementation theory • Evaluation Theory

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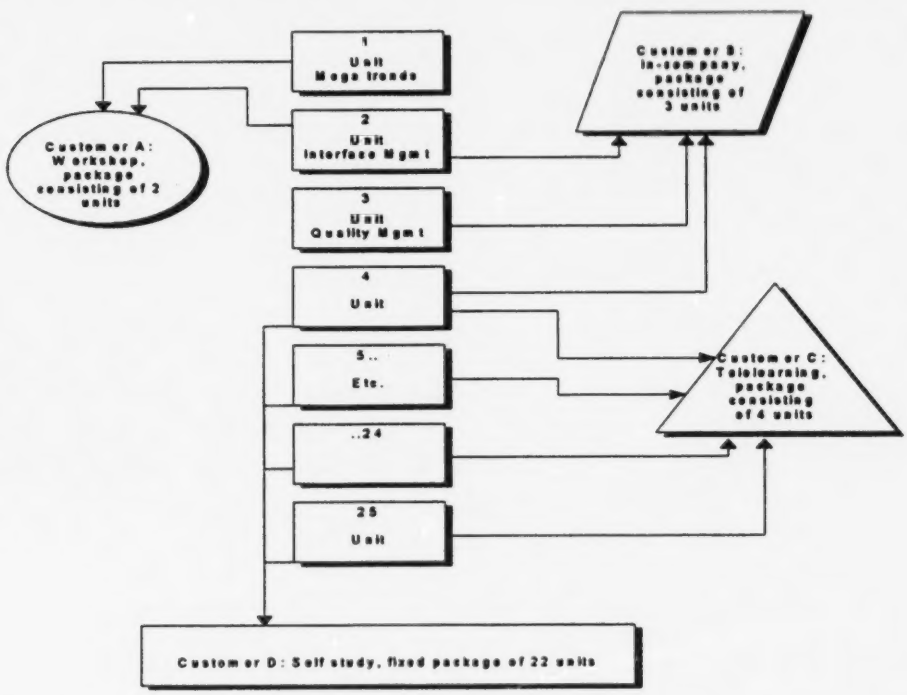
Several knowledge domains apply to all roles and are therefore mentioned separately. These are: Language Skill, Communications Skills (oral, written, interpersonal), Problem Solving and Negotiation. From this scheme new curriculum units have been derived through combination of traditional and new important knowledge domains.

The new curriculum structure has been built on the existing modular structure of management programs. But the difference from the existing structure is that the new curriculum units can be used more flexible, i.e. in various contexts and for different customers and clients. Furthermore, the questionnaire results can be used to develop specific curriculum alternatives for several distinguished groups of managers like managers in large companies, managers working in small and medium-sized enterprises or for managers at different levels within the organization. The basic idea is that management in the rapidly changing communications industry will need specific training and education as they encounter skills and knowledge deficiencies. According to Thompson & Carter (1995) a program for managers should be "flexible enough to recognize that a manager's work is not regular and that such tradition features as regular weekly attendance run counter to commercial reality". Also are "organizations interested in their managers improving their performance, not in gaining theoretical knowledge which does not lead to such improvement". A relatively fixed program structure, like the one that is in place at this moment, would not suit these needs. Figure 5 shows various ways in which a reservoir of autonomous curriculum units, be it workshops, plain knowledge, discussions or computer based training, may be applied for specific customer needs.

Figure 5 Various ways of applying curriculum units for different clients



This example shows 25 curriculum units of which some can be delivered in various modes. When customer A wants to educate his people quickly about new trends, the institute has the possibility to organize a workshop, based upon two existing curriculum units. Another customer likes to study at home

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in the evening for a certain certification. She can follow a course consisting of 22 units and take an examination. Elaboration of this concept could offer an unlimited number of possibilities to serve specific customers needs.

Relevance to the field

The strength of this study is that the combination of different research methods such as literature research, site visits, a survey and an expert conference leads to a thoroughly practice-based training and education supply for managers in the communications industry. In addition, two approaches of analyzing managerial work, tasks and roles, are combined to provide a broader perspective of the jobs involved.

Since the study has ended just recently, information about the usefulness and concrete content of the structure is not available yet. But since the structure has been based upon information from current practice and future expert opinions it will certainly contribute to a sound education and training program in the communications industry.

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Diversity and Development: An Assessment of Equal Opportunities and the Role of HRD in the Police Service

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This paper examines aspects of the relationship between organizational culture and HRM focusing upon the major finding that a powerful organizational culture reinforced by HRM practices such as employee development, can in fact create an exclusionary culture. The research, conducted within a large British Police Constabulary, explores some of the difficulties facing an organization with an exclusionary culture, when trying to implement equal opportunities policies.

The development of HRM has encouraged organizations to treat its employees as it would any other resource. Consequently in order to maximise the output from this human resource the practise of human resource management advocates the exploiting of the employees in order to secure maximum benefit to the organization and indeed improve organizational effectiveness. Academics are often swift to point out that such "exploiting" of employees is a neutral process and should not have any negative consequences for the employees. In theory the intention is that an employee is exploited only by virtue of their own potential, and that an organization merely wishes to allow all of its staff to perform at the highest possible standard. This requires investments in HRM practices such as performance management, recruitment and selection, rewards, and employee development. This approach may appear to benefit both the employee and the organization but unfortunately the notion of "exploiting" employees is not necessarily compatible with the promotion of equal opportunities or the management of diversity. Furthermore, as Legge (1989) points out, the problems associated with organizational fit offer little progression towards equality in the workplace.

This paper examines the fascinating area of the police service, and explores aspects of the organizational culture within the constabulary under investigation. Links are made between the organizational culture, the existence of an exclusionary culture, the management of diversity and the influence of an overall HRM strategy incorporating employee development which although attempting to manage employees to superior levels of performance may in fact unwittingly (or indeed wittingly) restrict the activities and contributions made by some of its members.

Interest for this research stemmed from the mutual interest shared by the authors around the existence of a dominant or exclusionary organizational culture. Of particular interest was the intervention of equal opportunities policies and their attempt to overcome inequities within organizations. Clearly many organizations claim to be equal opportunities employers, yet discrimination is widespread and imbalances prevail. Why is it then that equal opportunities policies do not work.

The Police Service

Police work is a diverse area for research as it involves a range of behaviours and demands a variety of skills from the officers such as physical courage, strength and fitness, combined with diplomacy, compassion, sensitivity and discipline. Research has been conducted within police services in the UK, Australia and the USA examining issues such as stress, and the quality of working life. The police service has long been a bastion of male dominance - purely in numerical terms if nothing else. When women

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began to infiltrate the ranks of the police force they were treated with scepticism as to their suitability to perform an essentially "male" task. Indeed in the UK when women first joined the service they were placed in a specialised department known as the Womens' Unit. Today however, it is much more commonplace to find women entering the profession and in fact the police service in the UK recieves many applications from women in the who are attracted to the police service and can see a structured career before them. What is problematic for the police service in the UK is the poor progression of women and very seriously the retention problem which appears to affect female officers much more dramatically than male officers.

The County Constabulary

The constabulary under investigation covers seven divisions, and serves one of the largest counties in the country. At the time of the research the constabulary employed approximately 1,500 officers and civilians, only 150 of whom were female.

The organization functions through both mainstream operations and specialist departments. The specialist departments include: criminal investigation department (CID), traffic, special branch, drugs squad, family protection unit (FPU), community affairs/crime prevention, training, process, task force, under water search and dogs section. It is useful to note the gender distribution by department as this apparently inequitable gendered division of labour is of concern to the County Constabulary:

Percentage of Female Officers by Specialist Department

Traffic	*3*
CID	*5*
Special Branch	*20*
Drugs Squad	*20*
FPU	*87*
CA/CP	*29*
Process	*20*
Training	*15*
Task Force	*4*
Under water	*0*
Dogs	*5*

Such gender divisions within these specialist departments provided an opportunity for deeper analysis into the sexual division of labour in the constabulary and gave insight into the gender processes. Two of these specialist departments therefore were chosen for research specifically because of the gender imbalances within them, namely CID and FPU. This is explained in more detail in the methodology section of this paper.

The County Constabulary not only displayed evidence of horizontal gender segregation but also clear gender divisions were apparent vertically within the organization. This is shown below:

Percentage of Female Officers by Rank

Chief Superintendent	*0*
Superintendent	*6*
Chief Inspector	*0*
Inspector	*4*
Sergeant	*3*
PC	*13*

It is important, however, to consider these percentages as actual numbers too as the under representation of women within the constabulary overall somewhat distorts the figures. For example in the table above the percentage of female superintendents is shown as 6%, this translates inreality to only one woman who

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holds this rank.

Equal Opportunities Policy County Constabulary is attempting to implementand pursue an equal opportunities policy. The results of an equal opportunities survey conducted within the force in 1993 posed two important questions:

1. Why do such a low number of female officers put themselves forward for promotion examinations?
2. Do female officers have equal opportunities to work in specialist posts?

Like many other organizations the police service recognises its own shortcomings in the area of equal opportunities but is unclear about how to specifically address the problems this situation presents. In other words, why is the equal opportunities policy inadequate and ineffective when the intentions are genuine? Why is the retention of female officers so poor? (The average length of service for a female officer is six years, compared to twenty six years for male officer.)

Methodology

The empirical research for this study employed qualitative techniques which can be divided into four stages. The first stage involved the use of repertory grid technique, the second stage built upon the data from the repertory grids and resulted in the administering of four different questionnaires, in the third stage interviews were conducted with a sample of female police officers, and finally the fourth stage consisted of analysisng the appraisal forms of both male and female police officers.

Repertory Grid Technique The immediate research challenge was to identify the organizational culture at County Constabulary. The reason for this was to explore our pre-research "hunch" (Dalton, 1964) that the police service had developed an exclusionary culture. In other words we considered it likely that the long standing history of males in within the police had contributed to the development of an organizational culture which somehow excluded women and possibly some men, who found themselves operating outside the dominant culture and therefore were disadvantaged as a result. It was necessary therefore to examine the values held by the members of the organization. The research question at this stage focused on performance. It was considered likelt that perceptions around effective performance would reveal some of the values held by members of the organization. Participants were asked to identify colleagues (at the same rank as themselves) whom they had worked with either in the past or were currently working alongside, and consider them in terms of how effectively they performed in their role. In each interview participants were asked to think of two colleagues for each category of good, average or poor, thereby considering the effective or indeed non-effective performance of six colleagues in total. Participants were not requested to reveal the identity of the officers and the issue of gender was only introduced at the very end of the exercise when the researchers enquired if any of the elements selected for the exercise had been female.

The repertory grids elicited a series of constructs which represented the perceptions of those interviewees surrounding the nature of effective performance within County Constabulary. Forty eight grids were completed, the number of constructs for each grid varied according to the interviewee. Overall almost two hundred measures of effective performance were identified.

Questionnaires The information gathered through the repertory grids was used to develop four different questionnaires. These perceptions surrounding effective performance which had been elicited from the grids were presented to four new groups of employees. The questionnaires (600 in total) were distributed to separate divisions in the constabulary. The focus for each questionnaire was different and asked the respondents to consider the items listed and assess whether they were:

1. Likely to facilitate promotion to the next rank
2. Likely to facilitate or inhibit performance in CID
3. Likely to facilitate or inhibit performance in FPU
4. Gendered (female like or male like)

In addition a fifth group received the BEM Sex Role Inventory (Bem, 1974) as a measure of gender self schema.

Interviews Six semi-strucutred open response interviews (King, 1993) were conducted with a sample of female police officers. The purpose of the interviews was to discuss some of the research findings from the repertory grids and the questionnaires in order to gain an employee perspective.

Appraisal Forms Fifty appraisal forms (for both male and female officers) were examined.

Content analysis was used to establish the similarities or differences between the appraisals of male and female officers.

Results

Repertory Grids Content analysis of the grids yielded noticeable similarities between subjects in the use of several constructs. For example; commitment; enthusiasm; reliability. In fact it was these constructs which appeared so consistently that it became apparent that commitment particuarly was a key factor in the perception of effective performance. On the whole content analysis did not reveal any significant differences between rank or role or in fact gender.

Questionnaires Analysis of the questionnaire relating to gender indicates some similarities between subjects in terms of those items perceived as male or female. The main discoveries from questionnaires two and three (inhibiting or faciliting performance in either CID or FPU) showed some interesting trends. The main discovery was the emergence of hard evidence that women have to work twice as hard as males in order to be considered effective in their work. The behaviours thought to be necessary for effective performance in CID were numerous, and the behaviours considered to inhibit performance were few, only two in fact. This was reversed when considering performance in the FPU. The results of the fourth questionnaire demonstrated that there was no consensus or agreement from the respondents as to which behaviours would facilitate promotion to the next rank. The resluts from the Bex Sex Role Inventory indicated that the males percieved themselves to be stereotypically male or more androgynous, whereas the females tended to view themselves as stereotypically male.

InterviewsThe interviews revealed that women in the constabulary felt that commitment was indeed a key factor when considering effective performance, but not on the interviewees could identify the behaviours required for promotion.

AppraisalsContent analysis of the appraisal forms showed that male beahviours were described in a variety of ways, whereas female behaviours were described in very narrow terms. The main finding however, is that there were no real differences between performace ratings for males and females.

Conclusions

The similarities between the constructs elicited via the repertory grids suggest the presence of a strong organizational culture which, on closer examination, appears to be exclusionary and male dominated. Perceptions around effective performance produced a high level of agreement among subjects, eg. commitment, enthusiasm. any organization which is able to demonstrate uch consensus among its employees as to what constitutes success must surely possess a powerful culture. Human resource management relies heavily upon the management of the organizational culture in order to successfully implement HR policies and practices. Legge (1989) states that models of HRM emphasise the management of an organization's culture as the central activity for senior management. Therefore the culture within the police service is a secure foundation for the effective management of the employees via the human resource management activities.

The emphasis placed upon employee commitment within the police service reflects the value placed upon employee commitment through models of sophisticated human resource management practice. The ability to secure flexibility and commitment is often considered to be one of the most attractive features of HRM (Storey, 1995; Blyton & Turnbull, 1992; Guest, 1987). From the research it is evident that employee commitment is valued highly in the polie service and the interviews demonstrated that such employee commitment is often synonymous with flexibility and a willingness to work long hours. The existence of a huma resource management culture which relies heavily upon co-operation, commitment and flexibility from its members may unwittingly restrict the activities and behaviours of some of its members. Commitment thus is a feature in the police service in all HR activites such as appraisal, HRD, recruitment and selction, and promotion. The result of course is that whole sectors of the organization are excluded via such a process.

Opportunities for HRD are exclusionary as female officers are not permitted to enter all specialist departments (which is the main arena for HRD). Women are not overtly excluded but the

orgnaizational culture almost renders it impossible for them to be considered for such posts by virtue of their gender and when such unquestioned sexual stereotyping is in place.. If HRD is to be avaialable to all members of the organizaton then the supporting requirements of equity and fairness must be in place in order for development plans and policies to be effective. The appraisal refelcts the equal abilities between male and female officers, yet in practice female officers are not entering a full range of jobs within the police service despite being equipped to do so.

Overall it is the belief of this research that a human resource strategy which advocates an equal opportunities policy on the one hand, yet demands a high level of employee commitment on the other, may in fact contribute to the continuation of an exclusionary culture. The HRD activities of the organization should be accessible to all members but it cannot operate within a culture that excludes some members. Unless some responsibilty is given to HRD for the full development and training of all employees the the HRD strategy will only ever be applicable to a chosen few. If HRD is appraoched from an employee persepective as well as an organizational persepctive then it may well be in a position to assist the organization in the management of diversity and the achievement of equal opportunties.

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Leadership Development in Multiracial Organizations

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Race and ethnicity are often acknowledged by managers and administrators to be important considerations in their efforts to lead multiracial organizations. A multiple perspective approach to the analysis of complex organizational problems involving diversity offers a more effective alternative to leadership than a single leadership perspective. A case analysis approach is used to provide an in-depth analysis of a leader's actions to address diversity problems within a multiracial organization and to identify the extent to which the leader utilized a multiframe approach to leadership.

Multiracial organizations are different from monoracial organizations in the sense that the proportion of race and ethnic minorities is large enough to significantly influence the decisions, practices, policies, and culture of the organization. Race as a social construct is often acknowledged by managers and administrators to be a primary consideration in their efforts to provide leadership to multiracial organizations. However, the theoretical literature on leadership and leadership development has not kept pace with the changing racial demographics of many organizations and the effects these may have on the most appropriate approaches to leadership. As minorities increase their proportional representation in organizations as staff, clients, or leaders/managers there is the potential for increased incidents of race/ethnicity related issues and problems. Race/ethnicity concerns include the following: interpersonal conflict, allegations of racism, law suits alleging racial discrimination, low morale among all employees, high employee turnover among minorities, low rates of professional advancement among minorities, loss of market share for niche markets serving the cultural preferences of minorities, and others.

These concerns can be either avoided or effectively ameliorated via the provision of appropriate leadership. However, "appropriate" leadership is often relative and contingent upon the underlying philosophical assumptions and perspectives of the influential actors within the context of problem situations. A multiple perspective approach to the analysis of complex organizational problems involving diversity offers a more effective alternative to leadership problems and issues than the more traditional practice of adopting a single leadership perspective. This paper draws on Burrell and Morgan's (1979) framework of sociological paradigms to identify the underlying assumptions and beliefs that inform four leadership perspectives: bureaucratic-managerial, symbolic/constructivist, transformational, conflict/political. These perspectives are then applied via a case analysis to a race/ethnicity related leadership problem that occurred within a multiracial organization.

Race and Organizational Leadership

"Race" is the categorization of people based on apparent similarities of physical attributes, e.g., form of hair, color of skin and eyes, stature, bodily proportions, etc. (Goldberg, 1993). Although there are few significant biological differences among people that would warrant differentiation into racial categories, the differential treatment based solely on racial demarcation is endemic to America's socio-cultural fabric and heritage. Several issues and trends suggest that race and ethnicity are pivitol leadership variables for many organizations now and in the future.

First, demographers have determined that modern society is apparently undergoing a historic transition from a predominately White society rooted in Western culture to a global society composed of diverse racial and ethnic minorities (O'Hare, 1993). According to the latest Census Bureau projections, by the 21st century today's racial and ethnic minorities who now comprise about twenty-five percent of the U.S. population will comprise nearly one-half of all Americans. In the next century, African Americans, Asians, and Latinos will outnumber Whites in the U.S. More importantly, the rapid growth in the number of minorities has been marked by an increasing diversity in terms of language differences,

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and cultural beliefs and practices within these population groups as new immigrant groups from the 1980s (such as Vietnamese, Cambodians, Dominicans, and Nicaraguans) have joined earlier immigrant groups of Mexican Americans, Cuban Americans, Chinese Americans, and Japanese (O'Hare, 1993). Also, by 2010, Hispanics are expected to supplant African Americans as the nation's largest minority group. By 2005 the labor force will be comprised of about five percent fewer White males and an equal percentage of more minorities: White males (38%), White females (35%), African-Americans (12%), Hispanics (11%), and Other (4%). Correspondingly, the U.S. labor pool of appropriately skilled workers is expanding at a slower pace than the demand for their labor, thereby creating more intense competition for talent.

Second, the significant increase in the populations of people of color also effects "market place" demands. Although poverty rates for African Americans and Hispanics remain unacceptably high, especially in comparison to the rates of Whites and Asians, the African American and Hispanic middle classes have grown tremendously during the past two decades (Dorn, 1992). The Bureau of Labor Statistics reported that in 1989-90 the typical African-American household spent $18,586 (about $172 billion) and Hispanic households spent an average of $23,432 (about $141 billion). When combined with the spending power of Asian Americans, minorities spent about $600 billion in 1992 and they are expected to account for 30 percent of the U.S. economy by the year 2000 (Mc Carroll, 1993).

The increased spending power of minority consumers is radically reshaping the way major corporations view and relate to the "typical" American consumer. The trend is toward "Micromarketing" where corporations seek to target market their products and services to specific market segments and away from "Macromarketing" where consumer preferences have been generalized. In this regard, major corporations (e.g., Pepsico, K-Mart and J.C. Penny and others) have launched strategic efforts (e.g., recruiting minority marketing experts, developing products and services for specific groups, marketing specific products of special interest to particular groups, conducting "ethnic marketing" campaigns, etc.) to attract minority consumers (Mc Carroll, 1993). Nearly half of all Fortune 1000 companies have some sort of ethnic-marketing campaign and in 1992 these companies spent over $500 million on ads and promotions to reach minority consumers. A culturally sensitive, diverse work force enables organizations to better understand and serve these diverse customers: consumers, clients, students, patients, victims, constituents, parishioners, or others.

Third, as a historically racially segregated society, most Americans have not sufficiently developed interpersonal relationship skills to address race/ethnicity problems that are inevitable in integrated organizational settings. For example, several sociological studies during the twentieth century have found that visual differences in physical color are less important than are the differences thought to underlie these colorations e.g., differences in attitudes, beliefs, and social states (Davis and Proctor, 1989). Color and race have had more than any other ascribed status, a preeminent influence on an individual's societal worth. In addition, race or ethnicity brings with it certain expectations, privileges, responsibilities, and limitations. These influence how a person is responded to by and , in turn, perceives the larger society. Studies of race and interpersonal relations have shown that many Whites avoid direct discussion of race, especially with minority individuals, and minimize the salience of race in such relationships (Davis and Proctor, 1989). However, minority individuals view race as critical to their personal and social identities and view the minimization (or denial) of race as problematic. Also, leaders and professional helpers often deny awareness of, or feign blindness to, their followers' (or clients') race, maintaining that they strive to treat minority followers (and clients) like "any other" follower/client (Davis and Proctor, 1989). The problem with this logic is that the "any other" follower/client is usually "White" and provides an inappropriate reference point for dealing with minority follower/clients.

Fourth, more effective leadership is an essential element in the formula for managing multi-racial organizations. Davis and Proctor (1989) investigated the literature on race and group leadership. They found: a) the race of individuals who lead groups is believed to be a critical influence on group processes and outcomes, b) racially heterogeneous groups are believed to be more difficult to lead because they heighten leader tensions and anxieties, and c) racially dissimilar group leaders experience member resistance, tension, hostility, and a general lack of trust from followers, and they are perceived by followers as being more threatening, less positive, and potentially more punitive than same-race group leaders. Effective leadership in multiracial organizations suggests that individuals who have learned to function in diverse situations tend to develop superior cross-cultural communication skills, become better leaders, and develop better skills at giving and receiving feedback. Increasingly, good management is

dependant on effectively working with other people by understanding and appreciating differences in values and perspectives as well as simple differences of opinion (Morrison, 1992).

Research Question

One question helped to organize this analysis: to what extent did the administrator/leader in the case utilize multiframe leadership in addressing race-related issues/problems in this multiracial organization?

Methodology

The primary methology informing the development of this theoretical perspective of leadership was a descriptive case study of race/ethnicity problems and issues within a multiracial organization. Due to the author's status as an outsider to the target organization the primary data collection strategy was that of "document examination" (Caudle, 1994). Several document sources were obtained and analyzed: published newspaper accounts, internal memos, internal investigatory reports, and cultural diversity training curricula and participants' packets. The types of data generated from these documents are consistent with goals of the study, i.e., to provide an indepth analysis of an organizational member's actions and the types of policies and guidelines issued by the organization under study (Caudle, 1994).

Conceptual Framework

Several scholars of leadership have advocated the appropriateness of utilizing multiple ontological and epistemological perspectices in reflecting on and analyzing issues of organizational leadership and diversity (Bolman and Deal, 1991; Reitzug, and Cornett, 1991, and others). This approach allows the leader to deepen his/her understanding and sinsitivity to aspects of such issues that might be overlooked when only a single perspective is considered. This multiframe theoretical literature also suggests that leaders/managers often have a dominant perspective from which they view all organizational problems. As organizations experience more race/ethnic diversity, these single-frame perspectives become increasingly problematic as appropriate ways to view organizational issues and problems.

Burell and Morgan (1979) developed a sociological framework that identified four categories of epistemological perspectives that they placed on two axes: objective/subjective, and social regulation/radical change. The resulting prespectives were: structural functionalist, interpretivist, radical structuralist, and radical humanist. These sociological perspectives are manifested in four leadership approaches: bureaucratic-managerial, symbolic/constructivist, transformational, and conflict/poltical.

Structural Functionalism The functionalist paradigm is the dominant framework for the study of organizations. It is chiefly concerned with social regulation and control, i.e., regulating and maintaining the current social order (Burrell and Morgan, 1979). It assumes the social world is composed of relatively concrete empirical artifacts and relationships, and elements of social reality can be identified, studied and measured through objective approaches derived from the natural sciences.

The bureaucratic-managerial model of leadership grows out of the perspectives produced in the functionalist paradigm. The leader's role is to determine how tasks can be accomplished most effectively and efficiently within a social order and structure that is predetermined and inexorable. The practice of leadrship is considered to be value-free and objective. Appropriate leadership can be prescribed via the standardized application of rational, context-free, formally-derived knowledge to a variety of problems and issues (Reitzug, 1994).

Interpretivism The interpretive paradigm views organizations are social constructs. They represent the subjective construction of individual human beings. Through the development and use of common language and the interactions of everyday life, people create and sustain a social world of intersubjectively shared meaning. It attempts to understand the manner in which the organizational world is constructed by the actors involved, i.e., via phenomenological studies. Multiple realities characterize organizations as people attempt to make sense of their situations. It does not seek change, only to understand the basis and source of human reality and consciousness.

The symbolic leadership framework finds its base in the interpretipist paradigm. The symoblic leader views humans as embodied, traditional, historical, and embedded creatures. People are located in a specific history, tradition, and set of circumstances which effect their ways of seeing and options for

acting. This tradition provides meaning and a sense of place. The symbolic leader develops a cogent understanding of the multiple realities and shared meanings present in the organization. Interpretative dialogue such as, the telling and re-telling of narratives and stories of human lives, allows leaders to provide the organization with its history, its unique place in the course of human events, and its significance in the world order. Symbolic leaders strive for insight and understanding of contextually-specific situations with a recognition that multiple contingency solutions exist (Reitzug, 1994).

Radical Humanist The radical humanist paradigm shares with the interpretivists a focus on subjective reality but differs in its focus on radical change. It is committed to a view of society which emphasizes the importance of transcending the limitations of existing social arrangements. Human consciousness is dominated by the ideological superstructures with which they interact, and that these drive a cognitive wedge between people and their true consciousness. This wedge of 'alienation' or 'false consciousness', inhibits or prevents true human fulfilment. Society is anti-human and it is concerned to articulate ways in which human beings can transcend the spiritual bonds and fetters which tie them into existing social patterns and thus realize their full potential.

The transformative leadership framework is most closely affiliated with the radical humanist paradigm. It argues that leaders should engage in dialogue with followers, but from higher levels of morality; in the enmeshing of goals and values both leaders and followers are raised to more principled judgment. It suggests that leaders should engage in critical analysis by reflecting upon institutional arrangements, to reveal the 'taken-for-granted' features of institutional life, and to allow for commentary on the ways and means that the institution either restrains or promotes human agency. Leaders are involved in the creation of new realities and visions. Their role is to convince followers that the current realities are not cast in concrete but can be changed for the better while still providing a sense of meaningfulness.

Radical Structuralist The radical structuralist paradigm seeks radical social change from an objectivist standpoint. It focuses upon structural relationships within a realist social world. Advocates of this perspective argue that radical change is built into the very nature and structure of contemporary society. Contemporary society is characterized by fundamental conflicts which generate radical change through political and economic crises. Human emancipation from the social structures in which they live is brought about through conflict and change.

The leader as politician framework views organizations as political arenas that house a complex variety of individuals and interest groups that must be managed by leaders. Individuals and interest groups differ in their values, preferences, beliefs, information, and perceptions of reality. Such differences are usually enduring and change slowly if at all. It argues that all events are value-laden (Gibson , 1986 in Reitzug, 1994), and organizational decisions involve the exercise of power by one individual or group over another. Policies and practices are frequently taken-for-granted however, they differentially effect various groups (Reitzug, 1994). Organizational goals and decisions emerge from ongoing processes of bargaining, negotiation, and jockeying for position among individuals and groups. Because of scarce resources and enduring differences, power and conflict are central features of organizational life. The leader as politician's goal is to free organizational members from sources of domination, alienation, exploitation, and repression by critiquing the existing social structure with the intent of changing it (Gioia and Pitre, 1990; in Reitzug, 1994).

Case: Racism in the Cream City Police Department

The Setting The Cream City Police Department (CCPD) is located in Cream City, which is a Midwestern city of 630,000 people, 34 percent of whom are minorities. The department's mission is to enhance the quality of life in the city by working cooperatively with the public to enforce the law, preserve the peace, reduce the fear of crime, and provide for a safe environment. The department is organized as a professional bureaucracy. That is, its operating core is very large relative to its other structural parts, there are few levels between the strategic apex and officers; control is provided mainly by the professional indoctrination of their members; and the support staff exists to serve the officers, who carry out the primary responsibilities of the department (Bolman and Deal, 1991). The strategic apex is comprised of the Fire and Police Commission (which is appointed by the mayor and is responsible for hiring officers), the Chief of Police, and district commanders.

During the past three decades, the department has had only three individuals to serve as the

Chief of Police. Author Lewis served in the position for twenty three years before retiring due to illness. An interim Chief served 18 months before a national search resulted in the hiring of David Garcia in 1989. Chief Garcia is officially listed as Hispanic, although he is of Polish/Mexican extraction. He came to Cream City after about ten years of successful service in another Midwestern city. He was attracted to this position because he saw it as an opportunity to put into practice his philosophy of Community Oriented policing, i.e., a policy initiative that broadens the police mandate beyond a narrow focus on fighting crime to include efforts that also address the fear of crime, social and physical disorder and neighborhood decay which are believed to correlate highly with crime. During his first years as Chief he developed an infrastructure for making community policing both a department-wide philosophy and the corporate strategy of the CCPD. For example, in 1991 he received an external grant to fund community conferences to address community policing in Cream City. Four forums were organized and were attended by block watch captains, city counsel members and department heads, Police Department members, and representatives of various community based agencies. However, his efforts to pursue his vision were often frustrated by internal strife born of a history of alleged racism in the department.

When Chief Garcia arrived, he discovered that police hiring was regulated by Federal court decrees from the mid-1970s (e.g., requiring that 2 of every 5 officers hired be a minority). These pacts stemmed from race and sex discrimination lawsuits (many of them were filed by the Minority Officer's League (MOL) to be discussed below) and resulted in agreements to integrate police recruit classes with women and minorities. Prior to the lawsuits, the number of minority officers was kept secret. Chief Lewis disclosed the number in 1973 only after being threatened with the loss of federal anti-crime funds. Among 2,133 officers in the department, 59 were African American, 10 were Hispanic, and 6 were Native American. Minority representation was 3.5 percent at a time when minorities represented 28 percent of the city's population.

After two decades of court mandated hiring, and particularly under the leadership of Chief Garcia, the number of minority offers has significantly increased. In 1992 that number stood at 387 (20.3% of the force): 259 were African American, 100 were Hispanic, 28 were Native American, and 2 were Asian. Chief Garcia has observed in a Cream City newspaper report that the credit for significantly increasing the number of minorities on the force could be attributed to the dedicated efforts of the personnel assigned to the department' s recruiting section. He said, "The goal is for the department to mirror the community we serve. For it is only through a greater representation of all segments of our community that a truly great department will become an even better one."

However, since his arrival, racial and ethnic strife have sharply divided the department along racial lines and significantly reduced the morale of the force. The Minority Officer's League (MOL) was organized when the department was under the stewardship of Chief Lewis. Its goal was to fight discrimination within the department and to seek the hiring and promotion of more minorities. In 1992 its ranks had grown to about 200 African American officers. In 1991, White male officers who were frustrated over departmental hiring and promotional actions involving race, formed an organization: Law Enforcement Officers Concerned About Reverse Discrimination (LEOCARD). The purpose of the group is to assure that the promotional process is fair and consistent, and to the extent possible, ensure the promotions of the best qualified persons regardless of race or gender.

In 1992, a Cream City newspaper mail survey of 1,900 officers (584 of which were returned; 42 were minority) revealed the extent of the polarization around the issue of discrimination and racism in the department. When asked if police officers discriminated against homosexuals, Asians, Blacks, women, Hispanics, or Whites, White officers were nearly unanimous in saying "No." The largest percentage (4%) agreed that discrimination existed against homosexuals. However, from 42 percent to 63 percent of African American officers agreed that the police discriminate against all but one group: White heterosexual men. Only 5 percent agreed that Whites were discriminated against. When asked if they have been a victim of racism themselves, 88 percent of the African American respondents and 77 percent of White officers answered "Yes." In written responses, many officers, both minorities and Whites expressed bitterness about racial tensions within the department. For example, one Hispanic officer responded that "racism" by the so-called superior White man was the thing he disliked most about his job. "I've had people of all colors in my home. Ask any White Sergeant how many Blacks or Hispanic friends they have and also when was the last time a Black man was in his home. Chances are their response would be, 'When my house was burglarized.' These are the typical jokes you hear about minorities." The survey also discovered that about 84 percent of White respondents said their morale was "low" or

"somewhat low" compared to 16 percent who rated it as "high" or "somewhat high." About 30 percent of African Americans rated morale as "high " or "somewhat high." It is within this context that Chief Garcia confronted two critical incidents involving race and ethnicity.

Critical Incident 1: The Darwin Cops In the early morning hours of July 22, 1991, a fleeing young African American male caught the attention of two city police officers who returned with him to apartment #213 located in a central city apartment complex. There, they discovered the demonic and grisly activities of serial killer Jim Darwin. Their discovery also led to the revelation of several events that occurred two months earlier on May 27, 1991. On the evening of this date, two White police officers were summoned to a predominately African-American community to help a 14 year old Laotian immigrant. This teenager was eventually killed by Darwin after the officers, responding to a citizen report of "a naked, bleeding boy staggering in the street", returned him to Darwin's apartment. Darwin (a White male) convinced the officers that the youth was a drunken "adult" house-guest who had wandered outside naked. He was Darwin's 13th victim; four more African American men would die before Darwin was arrested two months later.

Most of Darwin's victims were minorities, and three young African American women had made the first "citizen call" to the police department to assist the Laotian immigrant. According to a Police Commission Report of the incident, the efforts of the three women to provide information to the officers that was contrary to Darwin's account were vigorously rebuked. One of the officers agreed to talk to the older African American woman who made the "citizen call", but he did so in an abrasive manner. For example, he told her that he had several years of experience as an investigator and he didn't need an amateur like her trying to tell him his business. She was instructed to leave the immediate area upon threat of being "taken downtown."

A Fire Department medical unit arrived, but it was sent away without having assisted the Laotian youth. The Officers visited Darwin's apartment, where Darwin produced the Laotian youth's clothing and Polaroid photos of the youth posing in bikini underwear. While there they observed "a neat and clean apartment", however, they also noticed "a noxious odor." The body of Darwin's 12th victim was decaying in the bedroom.

Although they left the scene as ordered, two of the women who initially made the "citizen call" made several follow-up telephone calls to the police station to inquire about the well-being of the Laotian youth. They were repeatedly told that he was an adult, and that he was safe.

The revelation of these events embroiled the city in controversy. It pitted the police against the city's African-American community and severely divided the police department along racial lines. In this community racked by crime several citizens attempted to be responsible and assist the police in an investigation. However, they encountered from the police behavior that was threatening, abrasive, and patronizing.

During an inquiry into the incident by the Fire and Police Commission the officers argued that a history of mistrust between the Police Department and the community was a factor in accepting Darwin's story about a homosexual relationship with the Laotian youth. They were showing sensitivity to alternative lifestyles. They also pointed out that Darwin was 'a slick con artist.' However, the FPC rejected these explanations and found that the officers failed to conduct a proper investigation in 15 respects. The officers were suspended without pay and subsequently fired.

Concerned about the image of the police in the minority community, Chief Garcia ordered an internal investigation into race-related issues in the police department. The panel submitted its findings one month after the Darwin murders. The panel recommended several changes to improve the department's relationship to its service community, e.g., creating a community oriented policing advisory committee, recruiting more Asians and other minorities, and reviewing and revising the department's complaint procedure. However, one of their primary recommendations was to implement department-wide diversity training. In December of 1991, a consulting firm was hired and Cultural Awareness training was provided to all employees.

Incident 2: Minority Officer's League Alleges Racial and Gender Discrimination In October, Chief Garcia received written complaints from 28 minority officers from two district stations alleging racial and gender discrimination by their supervisors and calling for an independent study of racism in the CCPD. A newspaper article stated that the officers complained of being treated unfairly, of being disciplined more often and more severely than White officers, and being subjected to racially insensitive remarks by their supervisors. The leader of the MOL stated that stronger and clearer

guidelines were needed within the police officers' contracts to ensure their emotional and physical safety against discrimination. As an example, he cited a case in which the department may endanger the physical well being of some African American officers. He indicated one African American probationary officer was recently sent to a "gang infested area" on a call whereas in another case three White police officers were sent to the same area to ensure their safety. He said that the message to minorities was "you're expendable."

In response to these complaints the Chief of Police impaneled a Board of Inquiry to investigate racial and gender concerns. The Board sought face-to-face meetings with officers throughout the CCPD. In November, it met with two groups of complainants and their commanding officers. In addition, meetings were held with two groups of other officers who cooperated with the investigation. However, at three other scheduled meetings, the officers refused input and left the meetings when they were told that audio taping would no longer be permitted due to confidentiality concerns. In December, 21 officers from the MOL notified the Chair of the Board that the Board had not been responsive to their needs. The signatories were then ordered to meet before the Board to hear how the investigation would proceed. Later during this month, the MOL notified the Chief that the Board was not a creditable effort to make needed changes within the CCPD. Two days later, the Cream City Police Association (i.e., the Police Union) filed for (and received) a temporary injunction restraining the department from requiring officers to appear before the Board. The Chair of the Board and Chief Garcia met to identify an alternative strategy.

In January, 1993 officers throughout the department were notified of a requirement to submit Matter Of reports to the Board (as opposed to in-person tape recorded sessions). Several grievances were filed pertaining to this strategy, however, the written documents were submitted by all officers. In February, the Board met to review the Matter Of documents. Also, several reports were filed by minority officers alleging retaliation against them by supervisors. In March the Board requested a list of documentation from various departments within the CCPD. In April, the Board reviewed the final draft of recommendations. Seven months later, i.e., in November, Chief Garcia approved and authorized implementation of the recommendations. In December, the original 28 signatories were provided a summary of the Board's work and individual letters of response from Chief Garcia.

The recommendations targeted Five categories of organizational behavior: assignments, discipline, ethnic/gender sensitivity, supervision, and training. Multiple structural changes were recommended under each category of organizational behavior. Among those recommended for "ethnic/gender sensitivity" were the following: a) annual, on-going diversity training to open dialogue between all members of the department, b) enhanced exit interview process to determine why members leave, additional criteria on the performance evaluation form to assess employee's skills and abilities to relate to a diverse work force and community, and others.

Discussion

During the first incident involving two White officers who responded inappropriately to a citizen's call for assistance it could be argued that Chief Garcia responded largely from an interpretivist/symbolic frame of reference. For example, he did commission a panel to "investigate" the charges of racism in the department which symbolically represents to the community that he is concerned. He also supported the firing of the White officers which politically and symbolically aligned him with the minority community and African American officers in opposition to many in the White community and the position of the Cream City Police Union. However, given the limited scope of the panel's investigation and the minimum changes it proposed, I believe the actions of Chief Garcia more strongly support a functionalist/ bureaucratic-managerial model of leadership to address the issue.

The epistemological assumptions of administrators are a key element of their orientation to leadership and have implications for both decision making and the ethical use of power (Reitzug, 1994). In order for Chief Garcia to support the suspension and eventual firing of the officers and to implement the small number of changes proposed by the internal investigatory panel, he must believe that : a) organizational problems can be addressed objectively and matched with the corresponding best solutions. The extent to which the department experienced racism could be remedied via the addition of more minority officers, particularly Asian officers, a few structural changes, and mandatory diversity training; b) clearly specifiable behaviors exist that are generalizable to police work within any context. The hearing

by the Fire and Police Commission identified specific infractions of department rules and procedures and these were seen as justification for the dismissal of the officers; and c) organizational sanctions should be applied equally to those who violate the rules. In this respect the race of the officers did not matter. They utilized sloppy police procedures and their inadequate performance caused a serial killer to kill again.

The inappropriateness of this single-frame perspective was evidenced in the fact that the second critical incident occurred and again embroiled the department in controversy. In his response to the MOL's charges of racism within the department, Chief Garcia demonstrated elements of a multiframe approach to address the issue. First, from a functionalist perspective he recognized and used the chain of command structure to communicate with all the parties involved; utilized his authority to "order" the partitioning officers to "hear" how their concerns will be addressed; and he utilized his authority to "order" all officers to submit "Matter Of" reports to the Board of Inquiry. Second, from an interpretivist/symbolic perspective he commissioned a Board of Inquiry and gave it authority to probe deeply into the department's practices by gathering both quantitative and qualitative evidence of racism; by talking directly to the officers, both minority and White, and those at different levels of the department the Board could gain a more subjective view of the department's operations. Third, the board's recommendations suggested a need for both a paradigm shift in both how officers "think" about and perceive each other (i.e., the radical humanist perspective is evident in the Chief's support of long-term diversity training and other training initiatives) and the structures that govern the use of power in the department (i.e., the radical structuralist perspective is evident in the radical changes proposed in existing practice and may help to alleviate some concerns of minorities in the department).

Overall, Chief Garcia's leadership focused on the elimination of inequitable effects that might result from organizational practices and policies that have traditionally reflected the culture, mores, and needs of the dominant class (i.e., White, male officers). By following the Board's recommendations, it could be argued that Chief Garcia utilized elements of each of the paradigms to structure his response. However, there was little emphasis on dialogue and premise testing to identify the meaning perspectives of all officers. For example, the Matter Of reports submitted by all officers provided a one-way flow of information and the readers had no means to test their interpretations against the intentions of the authors. Therefore, in an organization severely divided along race/ethnic lines, more effective leadership would focus on the needs and interests of "all" parties, to hear their voices and to communicate and advocate one's views.

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HRD Initiatives Contributing to Women's Career Progress

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Despite progress in the number of women in management, very few are obtaining upper echelon positions. Recent literature suggests that one factor influencing gender differences in organizational advancement is opportunity for management development. This paper will present the findings of an exploratory study examining factors that influence women's access to management development and revisit how four major HRD initiatives may assist women's advancement.

Women have been entering the ranks of management in increasing numbers for the past 20 years. However, while women hold approximately 42% of management positions, they make up only 5% of top level staff (Powell, 1993). While this phenomenon has received press attention and has been acknowledged by Congress through the enactment of the Glass Ceiling Act of 1991, this skewed representation persists. Although some may argue that women's advancement is no longer a significant issue, companies choosing not to address this issue risk losing valuable resources (Antal & Izraeli, 1993).

A review of recent literature suggests that a major factor influencing the gender differences in organizational advancement is opportunity for management development (Ohlott, Ruderman, & McCauley, 1994; Tharenou, Latimer, & Conroy, 1994; Van Velsor & Hughes, 1990). If gender differences in management development are contributing to sustaining the glass ceiling, HRD is well positioned to play an important role in rectifying the situation. Several HRD initiatives have the potential to assist women in developing the credentials to be promoted to high-ranking positions in organizations. This paper will review the literature focusing on gender differences in management development, present the finding of an exploratory study conducted on factors expediting and impeding women's access to management development, and suggest four initiatives HRD units can develop to enhance women's management development opportunities and hence, their potential for career advancement.

Statement of Problem and Theoretical Framework

The literature to date indicates that women and men receive different developmental experiences during their careers (Ohlott, Ruderman, & McCauley, 1994). Women have reported having fewer opportunities to experience certain types of assignments than men (Van Velsor & Hughes, 1990). Ohlott et al. (1994) found subtle forms of discrimination that perpetuate the glass ceiling. For example, women held positions and took on assignments that were less visible within organizations and that involved less risk and less breadth of responsibility than men. Ohlott et al. (1994) write of the dilemma this creates:

> Denying women access to high-level responsibilities creates a vicious cycle in the selection and development process. If women do not have access to these challenges, they may be perceived as less qualified than men and may then be unable to qualify for the next job. If a women's career is later accelerated for affirmative action reasons, the organization may be setting her up for failure because she lacks these experiences (p. 62).

In a study analyzing promotion decisions made by a Fortune 500 company, differences were found in the reasons provided for promoting men and women (Ruderman, Ohlott, & Kram, 1995). Men

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were more likely to be promoted because they were "known quantities" to their bosses, they were perceived as being credible to upper management. Managers appeared to be more hesitant to advance women, asking them to prove themselves extensively before promoting them. Having the women "prove themselves" before promotion supposedly reduced the perceived risk taken by the manager. Ruderman et al. (1995) concluded that:

> . . . hiring managers still were not adept at using promotions as a means of giving women challenge and recognition. Bosses tended to have a difficult time determining how much risk to take when making assignment decisions for women subordinates, and it appears that the risk was perceived as greater with women, because bosses wereless comfortable with these candidates.

Training opportunities also may influence women's advancement in organizations. A study examining determinants of managerial advancement found that training, which men received more frequently than females, led to promotions (Tharenou, Latimer, & Conroy, 1994). Work experience had an indirect effect on advancement, in that work experience influenced the amount of training one received (the more work experience accumulated, the more training received). Having spouses and/or dependents at home reduced women's work experience base and increased men's. This phenomenon then influenced the amount of training men and women received (with men receiving more) and hence, their advancement opportunities. However, career encouragement increased women's training and development participation.

Developing mentor relationships is another important developmental activity for men and women wishing to progress in their careers. There has been a significant amount of literature produced on the importance of these relationships, particularly regarding women's advancement and the problems associated with obtaining mentors. Noe (1988) for example, outlined six potential barriers to women's access to mentors, including: lack of access to information networks, tokenism, stereotypes and attributions, socialization practices, norms regarding cross-sex relationships, and reliance on ineffective power bases. Parker and Kram (1993) discussed the potential barriers to women gaining access to other women as mentors. For example, since female mentoring relationships are more rare, they are highly visible in the organization. This visibility presents a risk for the mentor, if the protege were to fail. Also, women in upper management may be too pre-occupied with their own battles to break the class ceiling to have time to mentor other women. However, recent literature suggests that mentoring relationships are becoming more attainable for women. As an example, Ragins & Scandura (1994) found that executive women were as likely as executive men to be mentors. Numerous companies have implemented formal mentoring programs to eliminate many of the barriers women and minorities have experienced in gaining access to mentors informally.

Another developmental activity that impacts promotion opportunities, is overseas experience. Women are less likely to receive overseas assignments, which increasingly is becoming an important developmental activity given our global economy. Antal & Izraeli (1993) provide various reasons why there are few U.S. women expatriates. Included in their rationale are: women perceive less opportunity for receiving overseas assignments, so do not pursue getting them; expatriates usually are middle or senior level managers; it is assumed that women will not be treated kindly or credibly by certain cultures; and prejudiced attitudes exist within their own companies that impede women from being selected for overseas assignments.

While these studies suggest that the lack of management development experiences influence women's advancement they do not examine the specific factors that may influence women's participation in management development. Tharenou et al.'s (1994) study provides some guidance regarding what factors increase and decrease training and development opportunities for women. Blais, Duquette, & Painchaud (1989) determined that incidental costs (i.e., child care costs, loss of income) and conflicting role demands were the most salient barriers to participating in continuing education for nurses. However, a systematic examination of both facilitators and deterrents to participation in management development activities is needed to assist HRD in determining what initiatives are needed to assist women's career progress.

as a supervisor, there are a lot of jobs that other people don't want to do, so they kinda give them to you. So if you take them and then turn them into something more than what they expected, then that a lot of times gives you some credibility behind you, and then you start getting offered other things." Another women recounted her experience in becoming a manager. She was put in charge of a "loss program and turned it into a profit program." She concluded that "I had to prove that a woman could do it before I could really get the title. They (management) were very reluctant to put a woman in charge of a program."

Factors Facilitating Participation: One of the major factors facilitating participation in management development was the female managers' personal initiative -- being persistent, asking for opportunities, and being willing to take on additional responsibilities as a means of proving themselves. One female manager asserted: "Ourselves, our capabilities, our willingness, drive, I mean that's really what it comes down to." Other comments such as: "You have to create your own visibility," and "You can't just sit back and wait for someone to hand it to you," were indicative of this theme as expressed throughout the four group discussions.

Building relationships, networking, and developing connections with upper management were other factors that assisted some women in obtaining access to management development activities. For some, supportive bosses encouraged the pursuit of opportunities. Another found it helpful to have worked with several of the executives in her company prior to her employment when they were all part of the same community agency project.

Two women cited the value of support systems to help with child care when they were pursuing management development opportunities. One manager stated: ". . .I have a househusband more or less, so if I say 'I have a chance to go to Denver next week spontaneously, so you've got the kids.' I can do that a lot more easily than other people can, and a big part of my career decision to stay (here) was that I do have my extended family here, so in terms of back-up child care and all those other kinds of issues, I have that system in place." Another factor facilitating participation for some women was the availability of company programs/policies that supported professional development. Specific programs mentioned included: tuition reimbursement, management training programs, and job posting. Two of the groups cited company awareness of the need for greater diversity as a motivator to include women on committees and projects. Consequently, more opportunities emerged with the acknowledgment of the necessity for greater representation.

Factors Hindering Participation: Family responsibilities were frequently mentioned by managers as a deterrent to participating in management development activities. The discussants provided examples from their personal experiences and from those of their colleagues to suggest that women's responsibilities at home often preclude them from participating in management development and at the very least, make it difficult for them to do so. This theme was summed up by the following remark: "In looking at what are some of the difficulties in fulfilling the expectations that you have on the job, or things that you'd like to do yourself, family responsibilities really get in the way; I think much differently for women than for men." While some cited society's expectations as a major reason for this inequity regarding family responsibility, others indicated they wanted to spend time with children and family, and therefore self-selected out of developmental opportunities for this reason.

For the women in the manufacturing firm, the corporate culture was the greatest deterrent to participating in management development. They stated that the "male-dominated, military type" culture was less open to women's advancement and opportunities for development would be rare were it not for affirmative action initiatives. However, these women suggested that once they obtained opportunities to lead and had proven themselves, they were supported by their male peers and bosses.

Other factors hindering these managers' participation in management development were lack of resources (i.e., time and money), their positions within the organization, and their bosses. Some women expressed concerns about requesting funds for management development activities when budgets were tight and others in their departments needed money for projects as well. They also noted time to pursue activities was short when compared to work loads and home responsibilities. For a few, not working in a line position or in a department considered to be "important" to the company was problematic: ". . . Working in a support area means that you get overlooked for some development opportunities, because they feel that it doesn't apply." And just as some women perceived their bosses as supporters of their management development, others indicated their bosses did not support these efforts.

Gender Influence: The final question posed to the respondents asked if they perceived that

gender influences opportunities to participate in management development. With the exception of one participant, the focus group discussants believed that gender does influence access to management development activities. The issues of the "good old boy" network and the tendency on the part of the typically white male senior staff to groom those most like themselves were discussed frequently in the four focus groups. While several indicated it is getting easier for women to obtain opportunities, they still perceive upper management is not completely comfortable selecting and coaching women as candidates for advancement. This concern was exemplified by one women manager who stated: "Clearly the majority of senior managers have still been white men, and many of them have not had diverse experience with others who are not like them. . . they're comfortable with people who are like them and they know more people who are like them."

The participants emphasized the need to both be assertive and to do excellent work to gain access to management development activities. A major theme emerging from the data was the perception that performance expectations are greater for women than for men. Comments such as: "I just feel like I have to work triple hard;" "The performance level of the men can be mediocre and it's ok, but mediocre for the women is deadly; and "I do think that there's two sets of standards" (for males and females) were prevalent during the discussion of this question. Many of the women felt they were scrutinized more than their male counterparts and therefore needed to excel to prove themselves worthy of opportunities and advancement.

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HRD Initiatives

The nature of the human resource development function to maximize the potential of all employees while contributing to the overall strength of the organization leads naturally to it's involvement in women's career progress and in efforts to dismantle the glass ceiling. Further, programs that can have significant impact on career opportunities historically disseminate from HRD. Four HRD initiatives with the potential to enhance women's management development are: training, career development, mentoring, and succession planning.

Training: Management training opportunities have been demonstrated both in this study and others (i.e., Tharenou, et al., 1994) to be important in facilitating career advancement. HRD can assist women's representation in training programs by : 1. Making programs available to many levels of employees, 2. Examining their training rosters to determine if females are under represented in certain types of training programs, and 3. Offering training at times and locations that are convenient to many. Family responsibilities were cited in the focus group discussions as the greatest barrier to women's participation in management development activities. Organizations committed to diversifying their managerial ranks can set training hours, days and locations to minimize time away from family and offer compensation time for participants when seminars, conferences, and meetings require extensive time after hours.

Women managers' training needs will vary depending on the organization and should be determined through front end assessments. However, some of the gender research provides guidance regarding training needs. For example, Larwood & Wood (1995) updating a study they conducted in 1978, found women executives wanting additional training in communication and networking, and power and politics. These two issues were cited more frequently in the 1995 study than the 1978 research. Training programs that include discussions of these topics and explore some of the potential gender issues surrounding them may assist women and men in understanding each other and identify institutional biases in the corporate culture. Larwood & Wood (1995) also found women executives wanted training that led to the development of skills and functional knowledge. However, no specific skills and knowledge areas were consistently mentioned.

Should HRD create special training programs geared just for women? This issue has been debated for several years in the literature (see for instance, Lewis & Fagenson, 1995; Lam, 1990). The benefits of mixed-sex management programs typically outweigh the benefits of single-sex programs. Segregating the sexes may result in women feeling more isolated in the organization and invite suggestions that women are deficient in specific areas (unlike their male colleagues).
Lewis & Fagenson (1995) suggest that while there may be specific incidences where single-sex programs are appropriate, "'brown-bag' discussion groups and support networks should be considered as valuable

alternatives" (p.43). This suggestion may be particularly useful in organizations that are typically male-dominated. For example, in this study, the women from the manufacturing firm commented on how refreshing it was to spend time with their female colleagues and how they wished they could get together more frequently. The women at the authors' university have established a women's network that meets periodically to network and provide valuable career development information. HRD is well positioned to establish these types of support mechanisms.

Career Development: Career development combines individual interests with organizational goals to maximize need fulfillment for both parties. The career development process requires early discussion regarding individual career goals and recognition of the criteria for successful advancement within the organization. Preparation for the highest level positions requires both breadth and depth of background. At one level, this means that women, who frequently begin their employment in staff positions, need to obtain line experience.

Accomplishing this transition may take concerted effort, and HRD can assist in this endeavor both by influencing staffing policies and by encouraging women to move into line positions early in their careers. Specific mechanisms include implementation of a job rotation program, available to men and women who have expressed interest in professional development. Such a program increases the likelihood that women will benefit from this process instead of leaving access to such opportunities to chance or to favoritism. Another area of HRD influence is selection for expatriate opportunities. When relegated to informal networks, women typically do not receive equal consideration. Yet, in the global marketplace, international experience will increasingly become part of the criteria for organizational advancement, putting women at a disadvantage if they are not considered for overseas duty. Preparation of expatriates is another area where HRD can help debunk some myths about the effectiveness of women in overseas positions.

Additional staffing related options were recommended by women in our focus groups. They advised women interested in advancement to take on jobs that others do not want and ask to fill in when a boss is away. They also noted that persistence in requesting such opportunities and hard work once these chances are granted are essential in this process. An example:

> The good old boy network still exists...and they're making certain people slotted for certain positions and unless you let it be known that you would like to go into that position, no one ever really thinks that you would want to do that or that you really can...unless you actually assert yourself and be rather persistent, you have to be real persistent.

Further, they encouraged volunteering for positions that offer visibility to those at higher levels within the organization or an opportunity to work with these individuals. The group members stressed that these may be special small group projects or politically powerful committees. HRD's contribution here can be through monitoring project and committee membership and urging reconsideration of policies and procedures that create biases in selection.

Mentoring: Mentoring programs are another HRD career development initiative that can assist women's organizational progress. Offering potential insight into the culture and politics of the organization, experience within the system, and the opportunity for individual advice and encouragement, a mentoring relationship can be a significant contributor to career success (Lewis & Fagenson, 1995, Cox, 1993). While both informal and formal mentoring processes can yield positive results, the propensity for potential mentors within an informal framework to choose people like themselves as proteges can create a barrier for women, since most of the mentors in positions of power are male (Cox, 1993). A focus group member cited this situation, noting "I've seen it happen with other males in my area, where a person will single somebody out and help them along and stuff, but usually man to man. They're much more comfortable with that...." Consequently, despite some limitations, formal programs are perceived as giving women more equitable access to mentors (Lewis & Fagenson, 1995, Ruderman, Ohlott & Kram, 1995). Formal mentoring programs also are less likely to overburden the few prospective female mentors available, who might otherwise attempt to take on too many proteges.

HRD is the natural focal point for creation of a formal mentoring program. In addition to providing women with access to influential members of the organization through their mentoring relationships, such a program also offers the potential of greater visibility. Concerns over favoritism in assignments or the limited availability of mentors may warrant implementation of mentoring teams or

circles (Lewis & Fagenson, 1995). One mentor may have four or five proteges with whom s/he interacts as a team; or two or more mentors may share six or more proteges.

Succession Planning: Succession planning offers another means for HRD to impact opportunities for women within the organization. Although more long term in focus than other career development initiatives, the process of identification of potential candidates and grooming those individuals begins early, and significantly impacts career choices. Left to informal means, succession plans often reflect gender bias rooted in precedent, stereotypes, and social networks. While women are gaining acceptance at lower managerial levels within organizations, access to the highest ranks remains severely limited. A focus group member described the scenario this way:

> Women aren't taken seriously enough, in that you can be on all these different projects, you can show that you've been able to do all these things, but when push comes to shove, and they're looking at who to promote or whatever, it's as if, even though you did those things, it doesn't have as much credibility as a man...

HRD intervention into succession should focus on objectifying the process. Nowak (1994) outlines a system that begins with analyzing performance competencies required for top management, as opposed to basing criteria on the skills and styles of predecessors. The use of gender balanced panels to identify high potential individuals, instead of relying on the current senior (likely predominantly male) staff is another means of equalizing opportunities. These fundamental changes would broaden the scope of the process and minimize bias in candidate selection.

Global competition means that organizations that want to be successful in the future will need to maximize the potential of all of their employees. The HRD function is in the best position to respond to this need. Programs that promote the professional development of women, who represent half of the workforce, have the potential to make a large impact on how well companies are prepared to meet the challenges of the next decade and beyond.

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Facilitating Transfer of Learning from the Classroom to the Workplace

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Organizations have frequently expressed the need for employees who can learn and work effectively in a team environment. This article discusses a formal educational program which has responded to this challenge. This program used David Kolb's experiential learning cycle as the theoretical framework by which students could learn about group and team development experientially and more effectively transfer their learning to workplace activities. Implications for human resource development training programs and academic programs are examined.

Human resource development (HRD) can be characterized as having three elements: career development, organization development, and training and development (McLagan, 1989). Training and development may refer to not only formal and informal learning that takes place within the workplace, but may also refer to the formal educational processes that help prepare individuals to enter these workplaces as highly skilled professionals. However, many academic programs are perceived to be out of touch with their customers--their students and the companies that hire them (Foggin, 1992). In addition, one of the challenges facing the HRD profession is to ensure that training programs are strategically aligned with business needs and goals, and not just implemented in a pro forma, non-evaluative fashion. The heart of most jobs is teamwork (Johnson, Johnson, & Smith, 1991) and businesses want employees with "people skills," who can be effective team members and team leaders (Jenkins, 1992). Educational programs in business, in particular, have been criticized for emphasizing theory over practice (Raelin, 1993) when training their students.

Senge (1990) in his book, *The Fifth Discipline*, looks at businesses as learning organizations, where learning is valued as the best, and perhaps the only, source of competitive advantage. Senge supports the importance of teams in the workplace, stating that mastering team learning is vital to creating the learning organization because "teams, not individuals, are the fundamental learning unit in modern organizations. This is where the 'rubber meets the road'; unless the team can learn, the organization cannot learn" (p. 10).

Academic programs and human resource departments are responding to these business needs in many ways. In this article the authors will describe one program's response to the needs expressed by business: to have employees who have been able to transfer their formal learning to a business environment and who can learn and work effectively in a team environment.

Problem Statement

In order to address this problem of transfer of learning from a formal classroom or training environment to the workplace, the researchers' challenge was to design appropriate learning techniques that would ensure that learning that occurs in the classroom related to group and team development will transfer to a workplace which utilizes such teams to accomplish their goals. In effect, the researchers saw a strong need to integrate theories of group dynamics and development with the practice of working in, leading or facilitating teams in the workplace.

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Background

In order to prepare graduates who are better equipped to respond to these business needs for learning how to learn and team skills, an executive weekend format for a master of education degree in human resource development (HRD) was implemented in 1992 at Xavier University in Cincinnati, Ohio, USA, a private Jesuit institution. The program has integrated several unique elements to develop ethical HRD professionals who work in the fields of training and development, organization development, and career development: A cohort group of 40 working adults who remain together in "lock-step" fashion over 21 months, and a coordinated 11-course curriculum whose elements build upon each other and overlap in terms of reinforcing previously learned skills through shared assignments and group activities..

The program's format (24 intensive weekends over 21 months) allow for issues and skills to be explored in depth, with time for development, practice, feedback, reflection, and reinforcement. The cohort feature allows for the development of a community of learners who work together toward a common academic goal and allows for personal as well as professional growth.

Theoretical Framework

The theoretical framework for this study includes David Kolb's experiential learning cycle, transfer of learning models, reflection as a means of linking theory and practice, and team learning theory. The integration of these perspectives provides a foundation for the design of coursework in an educational program that leads to the transfer of learning to the workplace.

Experiential Learning Theory Kolb's experiential learning cycle (1984) serves as the centerpiece for the design of the coursework in this program. Students take Kolb's instrument (Learning Style Inventory--LSI) as a self-awareness exercise, participate in various experiential learning activities which follow Kolb's model, and write an ongoing learning journal using his learning process. The cycle also serves as a macro model for the transfer of learning to the workplace and provides the opportunity for connections to be made between personal and professional life experiences.

The core of the theory is a simple description of the learning cycle - how reflection is used to help translate experience into concepts which, in turn, are used as guides in the choice of new experiences (Smith & Kolb, 1986). According to the theory, learning takes place in all human settings; it is the method we use to adapt to and cope with our world. The experiential learning model provides a framework that helps develop the critical linkages among education, work, and personal development (Kolb, 1984). Kolb believes that learners need abilities in four areas to be effective:

> They must be able to involve themselves fully, openly and without bias in new experiences (Concrete Experience--CE). They must be able to reflect on and observe these experiences from many perspectives (Reflective Observation--RO); to create concepts that integrate their observations into logically sound theories (Abstract Conceptualization--AC); and to use these theories to make decisions and solve problems (Active Experimentation--AE) (Smith & Kolb, 1986, p. 12).

A truly effective learner is able to rely flexibly on these four learning modes in whatever combinations the situation requires. However, people have preferred learning styles, and when they have information about their preferred learning modes, they are better able to understand their learning strengths as well as potential barriers to effective growth. The experiential learning cycle itself implies that experience is the springboard for new learning. The last phase of Kolb's cycle, active experimentation, involves developing a plan for the application of these learnings in novel situations.

Transfer of Learning Models have been developed that offer a framework for enhancing on-the-job application of skills and knowledge that have been acquired during a training program

(Broad & Newstrom, 1992; Milheim, 1994). These models suggest activities that should occur before, during, and after the training event as well as roles and responsibilities for trainers, trainees, trainees' managers, and trainees' co-workers. Most of the strategies used before and after the training focus on establishing an environment that supports the use of the new skills on the job. Although there are limitations in creating that environment in training and educational situations where the participants come from different organizations, many of the transfer strategies can still apply.

Strategies to be implemented *prior to training* include: aligning the program with the organization's strategic plan, systematically designing the instruction, building in time for practice opportunities during the training, developing trainee readiness, and designing a peer coaching component for the program and its follow-up activities (Broad & Newstrom, 1992).

One recommended strategy to be implemented *during the learning event* is to have the participants develop an action plan which includes the steps to be carried out at the worksite to apply the new concepts and skills (Broad & Newstrom, 1992; Milheim, 1994; Parry, 1990). Broad and Newstrom (1992) also suggest providing opportunities for the development of support groups as another approach. Tallman and Holt (1987) propose that specific time be allotted for discussion of application strategies as well as time for reflection, synthesis, and/or integration of new material. Further, the instructor's use of many different examples, as well as providing learners with information about the general principles and theories behind their learned skills, can help increase training transfer by presenting various contexts in which trainees can expect to use the skills and knowledge used in training (Garavaglia, 1993).

Post-training strategies include the provision of job aids to be used at the worksite (Broad & Newstrom, 1992; Parry, 1990). Additionally, trainees can facilitate their own transfer by applying their new skills as soon as possible (Kemerer, 1991) and maintaining contact with training buddies (Broad & Newstrom, 1992). Follow-up communication and follow-up sessions can also help by providing an opportunity for support networks.

Another area of study that provides information about the transfer of learning is "application work" conducted during group dynamics instruction. According to Thomas (1990), the explicit aim of application work is to facilitate the transfer of learning to the back-home environment. He suggests that application work is most effective when integrated throughout the course rather than left until the end, as is common practice. He explains how abstract conceptualization and active experimentation are critical phases for application work and proposes that instructors can enhance the application work by helping students answer what was learned about themselves and what was learned that is generalizable to other contexts and contingencies.

Another avenue for facilitating transfer is to make the most of both on-line and off-line learning experiences (Gillette, 1990). According to Thomas (1990), "on-line learning occurs in the context of the experiential learning group, while off-line learning occurs during activities that are part of the instruction, but not in the experiential group, and also when the individual is outside the boundaries of the course" (p. 166). Thus, the instructor can provide for explicit application work in off-line learning experiences, but must make sure that they are carefully connected to the on-line group experiences. For example, students can be asked to do reflective work in the form of written assignments that can facilitate application work and also shape the nature of what is brought to the on-line experience.

Reflection Whereas the transfer concept draws heavily on Kolb's abstract conceptualization and active experimentation phases, the reflection phase is also critical in the full cycle of learning from experience. Schon (1983) developed the concept of reflective practice, which has a historical foundation in the learning models of Dewey, Lewin, and Piaget, each of whom espoused that learning involves the integration of experience with reflection as well as the integration of theory with practice. Although each contended that experience is the basis for learning, they also maintained that learning cannot take place without reflection. Reflection is one of the ways we make meaning and sense of our own performance; without reflection, we cannot revise our theories of action, and learning will not occur until new concepts, ideas, or theories of action begin to influence our behavior.

Journal writing is widely cited as a mechanism for facilitating reflection and learning (Kottkamp, 1990; McAlpine, 1993; Meyers & Jones, 1992). McAlpine (1993) discusses journal writing as a learning tool that links theory and practice. Through the description of the experience and the expression of thoughts and feelings, the writer gains an explicit understanding of what has been learned. Shulman, McCormack, Luechauer, and Shulman (1993) describe a journal assignment which begins with observation and description, follows with conceptual linkage, and culminates with conceptual insight, fostering a sense of forward thinking. They explain how the journal-writing process increases students' feelings of ownership, self-efficacy, and motivation and how students can become empowered to be responsible for their own learning.

Team Learning The practice of critical self-reflection and the willingness to question and scrutinize current ways of doing and thinking are closely related to team and organizational effectiveness. Organizational studies in a variety of contexts conclude that the most innovative and productive organizations encourage employees to scrutinize organizational behavior, to challenge existing practices, and to continually look for better ways of doing things (Brookfield, 1987). These ideas are also congruent with Senge's (1990) discipline of organizational learning.

According to Senge, Kleiner, Roberts, Ross, and Smith (1994), teams can follow a learning cycle that parallels Kolb's model. The team learning model involves coordinated action (Concrete Experience), public reflection (Reflective Observation), developing shared meaning (Abstract Conceptualization), and conducting joint planning (Active Experimentation). Once individuals become familiar with Kolb's cycle on an individual level, they can apply it in groups. Providing students with opportunities to understand and practice team learning in an educational setting will facilitate their application of the model in a work setting.

For many years, educational settings have been using team learning approaches similar to those being proposed by business. Cooperative learning is a systematic instructional technique in which students work together in small groups toward a common goal. Researchers have documented the effectiveness of cooperative learning methods (Slavin, 1990; Totten, Sills, Digby, & Russ, 1991), however much of the research has been conducted at the precollegiate level.

The use of cooperative learning groups not only enhances the learning process but also gives students practice using a team learning model. These experiences then become the foundation for learnings that can be applied in new situations. Therefore, the use of cooperative learning groups in conjunction with Kolb's experiential learning model enhances the learning process, reinforces the link between theory and practice, and facilitates the transfer of learning to the workplace.

Research Design & Methods

Theories on educational instructional design, adult learning, organization behavior, and psychological dynamics of groups were all examined to determine how integrating theory and practice could be accomplished within the parameters and guidelines of a graduate degree program. In particular, attention was paid to research reported in teaching, management, psychology, human resource development, and adult education journals. After a review of such scholarly journals was completed, practitioner journals in the field were also studied to determine relevance of current activities in the field to the theoretical foundations for this program.

It was decided to use experiential learning theory as the most appropriate and theoretically sound framework to design this research into transfer of learning. In order to provide learners with a *Concrete Experience (CE)*, the researchers formed the students into groups of up to 7 learners each, based upon diversity of work responsibilities, experience level, gender and ethnicity. These learning groups, similar to work teams, have projects to accomplish within specific deadlines. They stay together for these projects for one academic year and do not have options to transfer to another group. For the HRD assignments related to the group, they have a group presentation/training presentation and group paper. Students receive group grades for these assignments, and extensive oral and written feedback is provided to the groups by faculty and

fellow students. In-class activities are also designed to provide situations in which the learning groups participate in problem-solving, planning, decision-making, and team development exercises. These, therefore, all become a backdrop on which to apply the remaining phases of the experiential learning cycle.

At this point in the experiential learning cycle, the process of *Reflective Observation (RO)* is encouraged through the requirement of other individual and group assignments. Each student must maintain a learning journal throughout their group experience which is reviewed by professors to ensure that the student is actively engaged in the process of reflection on their group and work experiences. Each student must also prepare an individual analysis where they reflect on their own behavior in their learning group and the learning that has resulted. This reflective essay is used to integrate their formal learning about individual and group behavior; discussion about their own behavior and its effect on others, as well as the effect of team members' behavior on them, is a main focus of the assignment.

In addition, each learning group must prepare a written group analysis, which is a detailed reflection and examination of the group's growth and development over the school year. This paper also receives a group grade and is designed to help the students learn more about how groups work and their own behavior in groups.

These three assignments (learning journal, individual analysis, and group analysis) are designed to foster an environment which encourages reflection as a way of life--throughout the students' lives. They are also the means by which the curriculum comes "alive" and help students link what they are learning "in theory" with what they actually do on the job.

The process of *Abstract Conceptualization (AC)* at this point in the experiential learning cycle is where the issue of transfer of learning begins to be directly addressed. Each of the individual and group assignments has components where the learners integrate and compare their reflections on their own individual and group development with formal group and organization development theories and concepts discussed in class. Having reflected on how their learning groups progressed throughout the year, the students make connections to group development theories they have read about and studied and are able to extrapolate and generalize how work teams in organizations may progress, or be deterred, in working toward their goals. Having reflected also on their own behavior in the learning groups, they are better able to understand leadership theories and make generalizations to facilitating and leading work teams in their organizations. Finally in this phase of the experiential learning cycle, students generalize from this experience in using learning groups to adult learning theories which helps them design HRD curriculum and programs.

Having generalized from their reflections on their learning to theories about learning, group development, and leadership, the students enter the last phase of the learning cycle, *Active Experimentation (AE)*, ready to plan their systematic transfer of the learning to the workplace. Although the learners have made many changes in their personal or work behaviors throughout the year as a result of processing many of their concrete experiences with the experiential learning cycle, the end of the learning group experience provides a rich opportunity for the students on a macro level to transfer their learning to the workplace. They have reflected on their individual and group behavior and are more able to see the connections between classroom and work behavior; they've received feedback from fellow students and faculty on these behaviors; they now spend time in their individual analyses and journals action planning about their futures--what opportunities they have, or could find, to practice leadership or facilitation skills, design training which follows adult learning principles, or more effectively lead or participate in groups. The ending of this cycle is the key to more informed practice--the key to transferring their learning to the workplace.

Besides the use of Kolb's cycle as a macro framework for learning from experience, specific strategies were employed throughout the program to aid in the process of transferring learning to the workplace. In designing the program *before the program began*, faculty researched current issues in the workplace so that the program's focus could help address these business needs, used a systematic design process and built in practice opportunities, as well as a peer coaching

component. *During the program*, faculty used active learning techniques, provided examples of work and HRD situations, integrated application work throughout the various courses, facilitated discussions about application strategies and action planning, and helped develop support groups among the students. *During the second year of the program*, after the small group had been completed, faculty encouraged students to use their books and handouts as references and job aids, to apply their skills on the job as soon as possible, to partner with other students on projects, and to share their application experiences with faculty and students to take advantage of a learning support group.

Results

Encouraging and facilitating reflection in learning groups, as well as utilizing specific transfer of learning strategies, has allowed students to take responsibility for applying what they learn in the classroom to their learning groups and ultimately to their on-the-job behavior. Many students have also found that the process helps them to apply classroom group learning to their social interactions.

Although some students balk at putting their thought processes into words, the process "forces" them to consciously consider their own and others' behaviors and how they relate to academic theories and on-the-job relevance. Whereas the journal assignment allows students to track their learning process over time, writing the group and individual analysis papers helps the students reach closure at the end of their year-long experience and specifically apply their learning to their work situations.

In the Xavier program, students systematically provide extensive written and oral feedback to faculty throughout the year. Overall, the informal and formal systems for course evaluation have provided faculty with positive feedback on both the group and individual reflection assignments, as well as the methods for grading them.

It is difficult, of course, for academic programs to report actual transfer of learning to the workplace other than through self-reports by the students on application of their learning. Because this program's faculty continue to work with all the students in other courses for another year after the small group experience has ended, they do, however, get the opportunity to receive feedback on the learners' progress or difficulties in transferring their learning to the workplace. Many of their comments about application issues are directed toward some of their organizations' practices of having the supervisor be the "leader" of the work team, which creates other dynamics not necessarily present in their academic small groups.

Faculty also provided options for students to group with other students on other assignments throughout the second, final year in the program. Regardless of the nature and format of these projects, all students prepare, again, individual analyses of their learning and applications to the workplace as an addendum to the assignment. In this way, the experiential learning cycle is reinforced so that moving through the cycle becomes easier and more likely to be practiced once the program is over. As a result, therefore, not only do students receive a practical application of their learning to the workplace, they also develop the skills to practice "learning how to learn" while they are working on their career outside of the classroom. Perhaps this could be termed the most important and crucial learning of all.

Implications

Research on transferring learning from a formal educational environment to the workplace will continue to be a worthy task, especially as the world of work is changing so rapidly in today's global economy. Research on what skills are necessary to create and sustain a learning organization will continue to be explored, as well as the resultant effects for academic programs preparing the workers for such an environment.

There are a number of specific research questions resulting from this project:

- Are groups that are learning team development skills in a "stranger" group (a group with learners who are not from the same organization) more or less effective than those trained as an "intact" work team (an existing work team in an organization)?
- With movement toward "virtual" classrooms via distance education technology, what techniques to teach group development skills could, or should be, utilized?
- Many HRD courses only have a few months to teach team development skills; can generalizations be made from short-term training programs in organizations to academic settings?

This research also has implications for HRD academic programs elsewhere. Although using these tools for reflection can result in more intense in-depth analysis with groups that have a longer lifespan, the types of issues and learning will occur, however, in a semester-long course as well. The dynamics present in a group of adults that knows each of the members will have to continue in the same classes together for a year after their group experience is complete may be very different than a traditional program; motivation, dedication, and commitment to the group process and nature of the assignments may be heightened by the cohort program.

Programs that have cohorts of majors or an extensive common core curriculum, even though the students may not take all their classes together, could also benefit from this approach. Courses or seminars that orient students to undergraduate or graduate study may be good places to employ these techniques as well. Courses designed to facilitate personal and professional reflection and growth (including internships and cooperative assignments), as well as those highlighting interpersonal communication skills, conflict management, business problem-solving, learning theory, teacher or adult education, or team dynamics could also apply these reflection tools. Undergraduate and graduate programs using an intensive, acceleratedweekend format, which are being increasingly initiated for non-traditional students, may be suitable forums for experimenting with these group and individual reflection assignments.

Perhaps, however, the major implication and questions for future research lie with HRD programs in the workplace. Academic programs typically involve teaching students from different organizations, with different experiences, goals and interests; they provide many opportunities for students to indulge in "divergent thinking" and take risks. Training programs in the workplace, however, generally "mandate" attendance and are seldom opportunities for trainees to experiment fully with changes in their viewpoints and behaviors. Questions regarding the value of learning if such learning will not be supported by management back on the job, are many. Difficulties in transferring learning from an academic program to the workplace are as common as the difficulty of transferring learning from a training room to an office 50 feet away.

Conclusions

Transferring learning to the workplace from either a formal educational program or a training program in an organization is a challenge that must be addressed in light of a rapidly changing work environment. This article examined research into ensuring that learning about groups and team development can be applied in a workplace that is either using groups currently to accomplish many of their goals or is contemplating such a move. Using David Kolb's experiential learning cycle as the theoretical framework, an academic program attempted to provide students with the opportunity to process their year-long small group experience so that they could assertively address team development activities in their workplace. Responding to businesses' needs for employees who can quickly and effectively adapt to changes in their work environment is a mandate for all educators and human resource development professionals worldwide.

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Team Teaching HRD as a Mentoring Tool

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This study investigated perceptions of instructors toward team-teaching as a mentoring process in a graduate level course in human resource development. A qualification of the elements and conditions that influence the theoretical construct of mentoring are offered.

Any newly hired, tenure-track, assistant professor entering academia is understandably filled with questions of how to make the best of the induction period of an academic career in order to succeed and to prepare for tenure review. The challenge is even more complicated when the assistant professor cannot teach a graduate level course or direct graduate level research until graduate faculty status is awarded. While establishing a record of teaching, research, and service is the primary focus of the assistant professor, the head of the department in which the assistant professor is entering is none the less interested in the success of the new faculty member. Much time, money, and effort have usually been expended by the university to attract the faculty member; it is in the best interest of the department for the faculty member to be successful.

Braskamp and Ory (1994) report that "senior faculty are . . . increasingly being asked to help foster junior faculty members' development rather than let them develop on their own." They indicate that new faculty often have idealistic and unrealistic aspirations and are somewhat naive about their role as faculty members. While they appreciate assistance and mentoring from more experienced faculty, Boice (1992) adds that older colleagues are not given high marks for their collegial support of junior faculty. In a study of the nature and extent of mentoring and other forms of career support among faculty at a public university, Sands (1991) found that mentoring was not prevalent. "Where occurring, it was mutually negotiated and was primarily between persons of the same sex . . . ." Richardson (1993) initiated a national study of two-year college faculty behaviors that contribute to educational equity. Among other findings, he found that faculty reported lower levels of involvement in mentoring and advisement, and campus climate activities.

Braskamp and Ory (1994) suggested that new faculty members and heads or chairs must "sit beside one another" to construct a faculty development plan. "Sitting beside" must not be intended to be a controlling device, but a communication device among faculty. Developing such a plan is best done early in the new faculty's career. The problem then, for both the assistant professor and the administrator, is how to best plan the induction period best to remove barriers and provide opportunities for the faculty member's success. In this study, the initial strategy was to employ team teaching as a mentoring technique. The two researchers/participants in the case were a newly hired, tenure-track assistant professor and a tenured department head.

Through the use of team teaching as a vehicle, mentoring was viewed as an opportunity for a junior faculty member and a department head to "sit beside one another" for the purpose of assisting the junior faculty in becoming socialized into the institution and to experience mentoring.

Team-teaching involves two or more instructors collaborating over the design and/or implementation and evaluation of the same course (Easterby-Smith and Olve, 1984). Research related to team-teaching in higher education has generally been limited to undergraduate survey courses such as psychology (Morlock, Gaeddert, McCormick, Merrens, Shaffer,& Zandi, 1988), and management education courses (Easterby-Smith and Olve, 1984). However, research literature

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on the assessment of the "...outcomes of faculty collaboration in teaching does not exist " (Austin & Baldwin, 1991, p.41). Faculty collaboration and socialization through mentoring contribute to learning, collegiality, and teaching effectiveness (Austin, 1990; Austin & Baldwin, 1991; Mezirow, 1991). The role of mentoring in socialization of newcomers into a new organization or occupation is widely accepted; what is needed is inquiry that addresses mentoring as a collaborative process that occurs during socialization.

A case study of instructors utilizing a team-teaching approach to instructing an HRD course can shed light on the extent to which this instructional methodology supports mentoring as a socialization technique. Research is needed on instructor's attitudes and perceptions of team-teaching in a graduate HRD course in order to analyze mentoring and socialization.

An examination of instructor's attitudes/perceptions toward team-teaching in a graduate Human Resource Development course had not been investigated. Attitudes and perceptions of instructors team-teaching a graduate HRD course was needed in order to qualify the elements or conditions that influence the theoretical construct of mentoring through socialization.

Theoretical Perspective

The theoretical framework for this study was based on a synthesis between mentoring and the theory of negotiated order. Mentoring has been defined by Kinlaw (1989) as a coaching conversation that may be initiated by the employee or the manager, and Ingham (1993) defined mentoring as the "oral transmission of secret knowledge -- information about how a particular institution really works . . . " resulting in information that permits employees to further their own success. According to Kinlaw (1989), typical outcomes of mentoring are: development of political savvy; sensitivity to an organizations's culture; personal networking; greater proactivity in managing one's career; commitment to the organization's goals and values; and sensitivity to the preferences of senior managers.

Through the use of team teaching as a vehicle, mentoring was viewed as an opportunity for a junior faculty member and a department head to "sit beside one another" for the purpose of assisting the junior faculty in becoming socialized into the institution and to experience the outcomes defined by Kinlaw.

The social context in which collaborative or mentored relationships were negotiated in this study is a critical dimension of the process of team-teaching. The theory of negotiated order characterizes mentoring as the result of self-conscious interaction of negotiation and re-negotiation among participants (Gray, 1989; Goffman, 1983). Negotiated order is based on social interaction between participants who are negotiating and re-negotiating their relationships.

In addition to the effect of gender (Cameron and Blackburn, 1981), the researchers became aware of the influence of status (Fennel and Sandefur, 1983), and socialization (Feldman, 1976; VanMaanen, 1975) on the mentoring process as the study progressed.

Purpose of the Study

The purpose of the case study was to answer several questions related to whether team teaching as a mentoring devise impacted or influenced faculty socialization. The study focused on the following questions:

1. Are experience and personality compatibility of instructors an issue in a course utilizing team-teaching methods ?
2. How does team-teaching affect an HRD graduate course faculty planning, implementation, and evaluation strategies ?
3. Does team-teaching an HRD graduate course contribute to mentoring, faculty collaboration, and socialization of new faculty ?
4. How do faculty gender and subordination issues affect team-teaching as a mentoring device ?

Research Methods

Participants were a newly hired un-tenured faculty member and a tenured department head. Both faculty instructors were participant observers and a non-participant observer was a graduate assistant from the same department.

The case study (the two HRD course instructors and learners) research design used mixed methods (Ragin,1987) and methods triangulation (Patton, 1990). Techniques (Merriam, 1988) included unstructured in-depth dialogues and observations by participant-observers and a non-participant observer as well as the collection of relevant documents and dialogue data from the class participants. Team teaching HRD served as the contextual condition thought to be highly pertinent to the content and topic of the study.

Open-ended de-briefing dialogues (Patton, 1990) were completed at the conclusion of classes held at University of Arkansas graduate education facilities and at various times during the course of the study. Each de-briefing dialogue was audio-tape recorded for data collection and analysis purposes. Additional dialogues were summarized from notes taken during conversations.

Observations were performed by both instructors during each class period. Additional observations of class sessions were done by a graduate student in order to balance possible observer bias on the part of the instructors. Post-observation debriefing sessions were held after each observation.

Procedures and Data Analysis. On-going dialogues and post-class debriefings (Spradley, 1980, Strauss & Corbin, 1990) were analyzed *in situ* as suggested by Lofland and Lofland (1984). Instructors discussed and analyzed responses in on-going dialogues held throughout the research using a grounded theory approach to initial data analysis (open, axial, and selective coding) to qualify and attempt to support theory. Learner data was obtained from interviews, observations, and informal dialogues held throughout the research. Data was triangulated during each debriefing session. Qualitative software was used to support qualitative data analysis. Data strategies suggested by Miles and Huberman (1994) and Wolcott (1994) were used to organize, communicate, and analyze qualitative data.

Findings

Initial perceptions of team-teaching by faculty were similar to responses heard from learners throughout the course, for example, one instructor remarked: "I thought I knew what I was getting into, but even with my experience with teams, I was still kind of intimidated at first...I'd never done it before" (pa-17), and early in the research an instructor added that "I felt somewhat unsure as to how the process would work in regard to 'control', however, since I trusted the team-teaching partner, I felt that we could share control without stepping on one another's egos" (pb-5). The newly hired faculty member reported some anxiety "because I was teaching with my boss I wanted to perform well, probably better than I would alone" (pa-32) and "It was a pretty stressful beginning for me, but it was also innovative and exciting to be doing research 'out of the block' in my first class" (pa-12).

In-process debriefing analyses revealed that faculty were conscience of the possible bias inherent in participant-observer research (Spradley, 1980); for example, one instructor said, "are we really doing what we're suppose to be doing, or is it artificial because we know what good team-teaching is suppose to look like ? Are we modeling for the sake of research or are we modeling good team-teaching practices cause it
works ?" (pa-21,22). Both faculty members indicated that the team-teaching process required them to plan and make team decisions which were "...sounder, in that they are made with more reflection than I [we] normally would have given them" (pb-32).

Analyses of debriefing data indicated that team-teaching an HRD graduate course contributed to faculty collaboration and socialization of new faculty. For example, "it became easier and easier to work in a team-teaching situation as the semester went along. In fact, I came to look forward to checking with you [the partner] rather than making arbitrary decisions" (pb-29). New faculty

socialization was enhanced through the mentoring affiliation which, according to Ostroff & Kozlowski (1993), plays a significant role in professional career development. The senior faculty instructor reported that "I noticed during the semester that many of the students who had originally seemed apprehensive about pleasing a 'new' professor seemed to warm up to him a great deal and to realize that he had much to offer...it gave me an opportunity to mentor a new professor in a way that I otherwise would not have been able to do" (pb-35,40).

Issues concerning faculty gender and subordination were initially ambiguous. One faculty member reported that gender and subordination issues were "not as overt as I thought they would be; I guess I'm just more aware of them being new faculty" (pa-111). Gender was not overtly discussed during the debriefing sessions and although subordination was discussed, it was perceived by instructors as "insignificant". Content analysis of data indicated that team-teaching faculty generally did not consider rank or gender as an issue.

Upon completion of the team-teaching class, the researchers both reported a sense of loss in that the collegiality formed during the course was abruptly ended. In teaching courses individually the following semester, the faculty members reported that when faced with challenges or uncertainties concerning their classes, they would have enjoyed consulting their "teaching partner." However, both researchers found themselves forced back into traditional roles. The amount of time and effort required to seek the other out and relate the situation seemed to discourage continued collaboration. Because there was no shared understanding about the current class and students, the collaborative relationship was not pursued. The junior faculty member reported that lack of time was a deterrent because he was responsible for teaching two classes on his own, developing his research agenda, and building relationships with area corporations. The vehicle for mentoring, i.e., team teaching, was no longer in place. In addition, because there were other new faculty members in the department, the department head felt forced back into the role of administrator to avoid seeming to favor one faculty member over others. In addition, the possibility that continued mentoring could encourage unnecessary dependence was considered.

Non-participant observer perceptions. Observation data analysis from observations approximately one-third and two-thirds through the semester indicated that learners and faculty were interacting in a positive and "facilitative" manner. Observations suggested that participants treated each facilitator as equal during in-class interactions. During observations, the incumbent faculty member noted that a few participants with past history with him/her as an instructor tended to address him/her slightly more than the other instructor early in the semester; however, during later observation this focus was not observed. Observations also indicated that the instructors seemed to get along and genuinely appreciated each others' varied backgrounds and experiences.

Discussion and Research Implications

Results are deductive and sought to discover and support elements of mentoring and faculty collaboration in team teaching. Therefore, results are applicable only to the context of the study and may not transfer to different contexts. To address possible bias this study used detailed field notes, "reflections on their [our] own subjectivity", and worked in a team as additional checks on bias as recommended by Bogdan and Biklen (1982, p.42).

Qualitative analyses provided several insights into mentoring and the impact of mentoring on faculty collaboration and socialization. This study suggests that initial attitudes toward team teaching in graduate level HRD appeared to be unstable; that is, initial perceptions and attitudes of all participants, including faculty were noticeably affected by organizational issues such as evaluation, instructor control, authority, and accessibility.

The operational structure of faculty collaboration in this study served to enhance performance. Clear organizational arrangements enabled members to work within established boundaries in an independent, creative, and productive manner (Austin and Baldwin, 1991; Fennell and Sandefur, 1983). The social and political framework within which the faculty worked prescribed a consensus between them.

Course preparation time was increased compared to prior planning experiences; i.e., time was

spent early in course revision and planning to take advantage of each instructor's individual strengths and expertise. This extra time together tended to enhance faculty collaboration. Additional collaboration was afforded through weekly faculty meetings and debriefing sessions required time to discuss and reach agreement on revisions of delivery, content, and class activities. Faculty agreed that although collaboration increased planning time, it generated better results in their ability to deliver higher quality instruction and provide in-process (formative) evaluations.

Evaluation and grading could have had possible serious implications had it not been for faculty mentoring. The instructors collaborated at length with learners and each other on evaluation issues. At mid-semester an unpopular decision was made by faculty concerning a particular evaluation issue. Collaboration helped to provide resolution to the issue. One instructor said that "it was easier to stand by our decision with two persons than it would have been with one making the decision. I felt our position was strengthened by the fact that there were two of us" (pb-81-82).

Communication as a mentoring tool was expanded through requirements for faculty discussion, negotiation, and compromise. Divergent views and inquiry were encouraged through collaboration and mentoring, thus establishing an environment conducive to dialogue, and "dialogue can occur only when a group of people see each other as colleagues" (Senge, 1990, p. 245). A great deal of dialogue is required for successful collaboration (Austin and Baldwin, 1991). An unambiguous organizational structure e.g. formal higher education, helped to shape and maintain a process of communication that supported faculty interaction and mentoring.

Faculty collaboration was enhanced through mentoring. Instructional skills, cognitive development, collegiality, and dialogue were promoted by this collaboration. An additional benefit was to encourage reflective practice about teaching among faculty, an activity typically not a common component of university culture (Austin & Baldwin, 1991). Enhanced dialogue provided faculty with insightful criticisms and exposure to alternative teaching and personality styles necessary to reframe thinking and create an awareness of the processes of thoughts and feelings that create the learning experience. As participant-observers, faculty felt that dialogue as a validation or grounding (Habermas, 1984) of learning was critical in improving on-going facilitation and instruction, in formative evaluation, and in socialization. Improved collegiality as a component of socialization may serve to enhance the academic culture especially within the HRD program. Austin added that collegiality is a "bedrock of the academic profession" and that it is the ideal framework for faculty interaction (1990, p. 62).

Socialization of new faculty may be reinforced by mentoring. Stage models of socialization indicate that during the first few months on the job, new employees seek to learn about the new setting by relying on interpersonal sources such as co-workers and mentors (Feldman, 1976; VanMaanen, 1976; Schein, 1988). This study supports the notion that team teaching greatly enhances and accelerates the socialization of new faculty not only by interpersonal sources but through the noninterpersonal source of observation of others "in salient situations" (Ostroff & Kozlowski, 1992, p. 851).

Mentoring, like collaborative instruction and research, fits within the culture of the academic profession and the discipline of human resource development. Teaching that encourages mentoring and interactive modes of instruction promotes refined intellectual community (Austin & Baldwin, 1991) and aids in the identity of HRD as a profession. Additionally, through occupational socialization, it promotes individual identification with the academic profession as well as the HRD discipline. Through socialization and collaboration mentoring may serve to (a) establish new behaviors and shared assumptions, (b) preserve the organization's integrity and autonomy, differentiating itself from the environment and other groups, and providing itself with an identity (Schein, 1988).

Individual philosophies around instructional methods and other principles of adult learning had an affect on faculty collaboration, socialization, and the success of mentoring in this study. This conclusion supports Peters and Jarvis' (1991) supposition that the relationship between teachers is more complex when philosophical viewpoints differ. Since philosophies include social and political dimensions, instructors with diverse social and political viewpoints should critically examine efforts to collaborate and mentor.

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Female learners felt that a focus on societal issues was encouraged which supports the notion that "women hold a distinctly different worldview from men" (Cox, 1994, p. 106). Gender and subordination issues had no overt influence on faculty mentoring and socialization; however, they did play a surreptitious role in facilitating collaboration. Status imposed an intrinsic authority and decision making arrangement (Fox and Faver, 1982) that served as a mediating force when problems over evaluation strategies proved difficult to solve. Although gender was an insignificant issue in this study, it has been reported that women and men approach mentoring and collaborative relationships differently (Austin & Baldwin, 1991). Even though these differences were not brought to light as a result of this study, the fact that a faculty member was subordinate and of different gender should not be ignored as possible ambiguous variables influencing faculty collaboration and socialization. The new faculty member added that "I'm not so sure I would've had the same experience with a male faculty member " (pa-61).

Research implications. Every effort was made to make this study valid and to enhance credibility through multiple research methods and establishing trustworthiness, however this research was not without limitations. Much of what was learned in this study was dependent on the interaction between investigator(s) and the context of the study (Lincoln and Guba, 1985, p. 208).

Because only one graduate level HRD class was studied, future research should be conducted that examines faculty collaboration and mentoring in a variety of adult learning environments including undergraduate and continuing education classes. Team teaching within private and public, large and small, and research and teaching institutions all need to be examined.

Future research is also needed to investigate socialization as a learning strategy for newcomer faculty. For example, research is needed on how newcomer faculty use a collaborative relationship to negotiate learning (a) new tasks, (b) role boundaries and behaviors, (c) group interaction, and (d) organizational demands. Moreover, measures of organizational impact are needed. The influence that team teaching and mentoring has on organizational climate and culture could serve to establish faculty mentoring as a mechanism for attracting, selecting, and socializing new members.

More research is needed on collaboration and mentoring of faculty of different gender as well as differences in status. Few researchers have examined the experiences with collaboration or mentoring of academic women (Austin & Baldwin, 1991, p.74), especially women in high status positions. Finally, additional qualitative studies are needed concerning team teaching and faculty mentoring. A variety of methodologies such as naturalistic inquiry, educational ethnography, and case study should be pursued to provide research which "gets beyond initial conceptions" and provides human resource development research with a quality of "undeniability" (Miles and Huberman, 1994, p. 1) and truth.

Summary

Findings of this study suggest that faculty mentoring, collaboration and socialization are supported and enhanced by team teaching. This research also uncovered several potential benefits of team teaching as a mentoring process. First, as a socializing activity, team teaching may positively influence newcomer socialization and thus affect the culture and climate of the organization. Second, the results of faculty mentoring may enhance development of political savvy; sensitivity to an organizations's culture; personal networking; greater proactivity in managing one's career; commitment to the organization's goals and values; and sensitivity to the preferences of senior managers. Third, the interactive nature of team teaching may be a potential source of intellectual stimulation and cognitive development for learners as well as faculty. Finally, team teaching reflects the longing for teamwork and team learning in organizations and may serve as a model of the potential of collective learning.

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Evaluation Research for the Development of Effective Practice in the Video-Teleconferencing Distance Education Human Resource Development Classroom

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A preliminary report is presented on the evaluation research of graduate-level classes in human resource development (HRD), delivered through video-teleconference distance education (VTDE), in the hope that this will inspire instructors to transform their own VTDE class settings into laboratories of effective practice. The authors discuss the background and approach to the course, describe the evaluation research strategy, give examples from the data, and explain how some effective practices for VTDE were developed.

Compressed video technology is revolutionizing distance education strategies. Where once expensive up and down links to orbiting satellites were required for two-way televised communication, compressed video technology has made every classroom connected to a T-1 digital telephone line a potential site for video-teleconferencing distance education (VTDE). Earlier, Wedemeyer (1981) commented:

> What is different about learning via technology today is the scope of learning facilitated by technology, the altered roles of teachers and learners, the changed environment for learning necessitated by technology, and the sophistication of the processes used in developing instruction that will be communicated by technology. (p. 111)

At Northern Illinois University (NIU) in DeKalb, Illinois, among the first courses to employ VTDE was a graduate-level course in human resource development (HRD). The course was taught simultaneously in the 1995 Spring and Fall semesters at two sites: on the NIU campus and at the College of DuPage in Glen Ellyn, Illinois. At NIU, HRD is an inter-professional field of study. Students who major in it initiate their study through adult education, counseling, or instructional technology. The pollination of ideas that occurs among students in these fields is enhanced by the addition of students from business, public administration, and other departments. The classes were anything but homogeneous. They consisted of American and foreign nationals, and part-time and full-time students at the master's and doctoral levels. There were students with varying amounts of HRD experience, ranging from little or none to an impressive record as HRD directors or trainers in business, industry, government, and the voluntary sector.

This VTDE course had a two-fold purpose: (1) To provide an overview of theory, research, and practice relating to individual development (training), career development (education), and organization development (change); (2) To acquaint students with the potential and complexities of the VTDE classroom, so that they can employ it confidently and intelligently as a delivery system in their own work settings. In effect, the classroom becomes a laboratory in which students study HRD while simultaneously grasping the elements and operation of VTDE classrooms. The behaviors of the instructor, the students, and the site coordinators combined to serve as a model for students. The task of the site coordinators was to prepare for classes by checking the quality of the VTDE transmission for problems such as distorted or missing visuals,

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weak or echoing audio, etc., and to operate the system. When a site coordinator operated alone because the instructor is at the other site, the coordinator has the added responsibility for arranging discussion groups, responding to students' questions, and collecting their papers and journals.

In this classroom/laboratory, students receive a book of readings to supplement the textbook, paper copies of transparencies on which students can make notes during class, study questions that serve as advance organizers for the next week's class, and case studies and simulations designed to relate theory and research to practice. Selected HRD experts either attended a class at one site or interacted by telephone from their homes or offices with classes at both sites. One specially interesting encounter featured an interview with the textbook's author, Dr. Jerry Gilley, based on questions submitted to him beforehand. During this stimulating two-hour dialogue, new questions were raised that challenged some of his assumptions and conclusions. In this process of clarification, which was marked by openness and candor, both author and students gained new insights into the HRD field.

Obviously, this laboratory experience at both sites involved an immense amount of preparation on the instructor's part, including mastery of the VTDE system and its operation. According to Gehlauf, Shatz, and Frye (1991):

> Instructors do not want to be told how to teach; rather, they want to get a feel for the equipment and the specific technique they need to use to be more effective in interactive television classrooms. To facilitate this type of training, the technical system must be as "user friendly" as possible, so that the technology is transparent to the educational process. (p. 26)

As for the design of the program, some elements of the model developed by Blaney (1974) for curriculum formation proved valuable. The model presents three modes of curriculum formation: institutional, shared membership, and individual. The institutional mode focuses on content as determined by the instructor, the shared membership mode focuses on learner-centered and problem-centered concerns, and the individual mode focuses on the self-directed learner.

The institutional mode influenced the choice of the course content, as reflected in the course outline, the mini-lectures given to classes, and the final examination. The shared membership mode influenced the development of collaborative (group) activities, such as discussions of study questions presented as advance organizers, case studies, simulations, panels based on field trip reports, and the exchange of ideas with selected HRD experts in both Canada and the United States. From these activities emerged mutual trust and teamwork at both sites, exemplifying some aspects of the team learning process so important in today's organizations. The self-directed mode found expression in the students' journals, which consisted of their reflections on content and process, often interspersed with practical applications of the material learned. Those students having a background of HRD experience performed as reflective practitioners who could apply their new learning to "real" situations.

In the design of content and process, it would be easy to settle into a behavioral, structured approach to teaching and learning in a VTDE classroom. To avoid this possibility, the instructor must develop a credo, or personal philosophy, based firmly on the conditions of adult learning. He or she is, after all, dealing with adults who would almost certainly reject the notion of watching a three-hour television lecture--hence the need for multiple activities as described above. One important condition of adult learning is the creation of a climate of trust that will allay the anxieties of students confronting an unfamiliar delivery system. On the instructor's part, a climate of trust involves cherishing each student's individuality--his or her special needs, interests, and rich life experiences. Niemi (1992) commented as follows:

> I encourage their growth by establishing a climate of trust in which students feel free to express their views, to share ideas from their diverse backgrounds, and to challenge each other and me. (pp. 14-15)

One initial strategy, employed at the first class session, helped to create a friendly, relaxed atmosphere by forming dyads, with each student introducing his or her new friend to the two classes via a two-minute television spot. Another benefit of this experience is that it provided the students with an early, natural opportunity to familiarize themselves with the delivery system. A second strategy for creating a friendly climate between the two classes was to bring all of the students together, later in the course, for a dinner meeting with a speaker.

Another condition of adult learning conducive to the success of a VTDE classroom is the background of life and work experience that learners bring with them. Knowles pointed out the value of such experience as follows:

> Because adults are themselves richer resources for learning than is true for children, greater emphasis can be placed on techniques that tap the experience of adult learners, such as group discussion, the case study, the critical incident process, simulation exercises, role-playing, skill practice exercises, field projects.... (pp. 44-45)

To the VTDE course under discussion, the students brought not only a rich background of life and work experience, but some of them also had worked in instructional design, media systems, and other HRD activities.

A third important condition of adult learning is that learners must enjoy a sense of progress toward achieving the goals of the course. This sense of progress became evident in the students' bi-weekly journals, which were read by the instructor and returned to them with his comments. These journals, together with evaluation instruments completed by the students and site coordinators, formed the basis for evaluating the course.

Evaluation Research

Effective instruction is the goal in every classroom. As stated previously, modeling effective instruction in VTDE classrooms was specially important in that many students either had implemented, or soon would be called upon to implement VTDE instruction by their organizations. Modeling effective evaluation procedures was also an important classroom goal.

Research on distance education settings has shown that participant evaluation is consistently among the best indicators of effectiveness (Schlosser & Anderson, 1994; Sachs, 1993; Verduin & Clark, 1991). The authors believe that this evaluation is even more important in a graduate classroom, where many students occupy professional positions. The authors' goals for the evaluation process itself were twofold: (1) to supply formative data to the instructor and site coordinators for the ongoing improvement of instruction, and summative data on the VTDE classroom as basis planning future VTDE courses; (2) to supply students with an opportunity to participate in the evaluation process and to reflect on their own learning experiences. Thus, the VTDE classroom served as a laboratory for developing effective practice. Two research questions guided the date collection. The first research questions was: "What was the quality of the VTDE experience?" The second research question was: "What could constitute an effective practice standard for VTDE?"

Data collection consistent with evaluation research methodology (Isaac & Michael, 1987; Cooley & Lohnes, 1976) was included as an integral part of the course structure. To meet the goals that had been established for the evaluation process, it was necessary to collect data from

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multiple sources. These sources included the following: a written record of class activities, with special attention to problems directly related to the technology of VTDE delivery; declarative and interrogative journal entries provided in be-weekly students' journals; a summative evaluation instrument with narrative responses from the instructor and the site coordinators; a summative reflection paper by the site coordinators; a summative evaluation instrument with Likert scale responses for the students, identical to instruments distributed by the department to other graduate classes; and a summative evaluation instrument with both Likert scale and narrative responses for the students, directly addressing the quality of their VTDE experience.

With regard to Research Question #1, the data were analyzed with reference to their source, and then triangulated across sources by both theme (e.g. instructor effectiveness) and by particular events responded to (e.g. failure of audio quality during sessions). With regard to research question #2, subsequent research issues were identified, employing the triangulated data analysis (e.g. "How can we improve the instructor's audio quality at the remote site?"). Solutions were proposed, implemented in the classroom, and evaluated.

The evaluation research data, because of their multi-source origin, provided a rich view of a VTDE classroom, and the analysis should prove useful for anyone interested in distance education.

For the purpose of this paper, a preliminary report, the authors limited their scope to providing examples from the data rather than a complete analysis for research question #1; and present a brief discussion of how some standards were developed with regard to research question #2. The authors expect to make a more complete presentation of the data and a thorough analysis in a future monograph.

Examples From the Data Collection

Entries in Students' Journals - Spring, 1995

1. I was somewhat hesitant to register for this course because of the method of delivery. In fact, I did register for this class a few years ago when the method of instruction was audio-conferencing. I attended the first class, which was held in a conference room at the College of DuPage, and withdrew the next day. It was hard to concentrate on audio alone. Since I didn't need the class for a degree, and I was just taking it for my own benefit, I wanted a traditional classroom. When I registered this past January, I still didn't need this class, but I wanted to continue learning (especially about HRD), and CoD was the perfect location for me. When I arrived on the first day and discovered that the classroom was so attractive, and that we were using two TV monitors, with microphones all over, I was relieved. Perhaps this experience would work. I was very pleased to learn that I could see and hear the Professor, and he could see and hear us. This course is just about over now, and I am extremely glad that I enrolled and stayed in the class. Distance education is becoming a very important method of instruction in the western suburbs west of Chicago and at CoD, where I am employed. I feel so lucky to have been a part of a new and emerging technology.

2. I recently thought about keeping track of the number of responses from the individual classroom participants when Dr. Niemi was physically present at the site, and when he was the on-air presenter. Since we have recently had visitors [guest presenters], I chose not to track the number of participants' questions. However, if I would take a distance learning class in the near future I would consider doing this. As I look back on the CoD [College of DuPage, the off-campus site] experience during this semester, I believe that student interaction was higher when Dr. Niemi was physically present.

3. I am sure that both of you experienced some frustration with the technology system in teaching this class, but both of you continued each night to stay focused and do an excellent job. Watching your progress through many technology problems has helped me to do the same. I think that you have both shown all of us that adults need to possess a philosophy that allows them to continue learning, cherish other learners, and update skills with all new advances in the field, such as changes in technology. It may be difficult--but it is worth the results!

4. As with others who have had to come into the technology, I felt a bit of empathy for Mr. R. [guest], especially when he was dealing with the video on jazz. As a student throughout the class, I have learned to accept the hurdles; however, when I detect the frustration of the speakers, I feel a bit sorry for them and wish that it ran smoother. On the positive side, the instructor in me is really learning a lot by watching the different professionals react and cope with the physical potholes and emotional hurdles associated with the technology.

5. On the plus side, distance education provided me with a technological experience in which I feel lucky to have participated. I work in the ITD Center for Adult Education at Waubonsee Community College, where we are in the process of initializing equipment setup for a distance education program. I'm to be in charge of the program, which I feel to be tremendous opportunity. The opportunity to participate in this class has heightened my awareness of the complexity of what we hope to accomplish. I can also see other, less personal reasons for viewing distance education in a positive light. It provided me with an opportunity to take a class which was closer to my home, saving time. It provided me the opportunity to meet another type of student. Every student in this class was employed in the "real" world. Given the relatively high number of students in both classes, if the class had not been offered via distance education, it might not have been possible for all of us to attend the class.

Entries in Students' Journals - Fall, 1995

1. Having already completed six of the fourteen classes in this program, I find that I'm becoming much more comfortable with distance learning technology. I still find, however, that I am a bit inhibited to speak up in class, and wish that the ceiling-mounted microphones at CoD would pick up our voices better, so that we wouldn't have to pass the mike. The technical quality of our two-way voice transmission was noticeably better on October 19th, and it seemed to have a positive effect on our cross-campus dialogue.

2. I wanted to comment this week about class interaction, and give some feedback about my experiences thus far. When I first decided to take a course, I wondered how the class interaction would be. I have really enjoyed our small group activities and the chance to discuss, brainstorm, and share with small groups. I have also been fortunate to be in different groups with different people in the course. Every week I am continually amazed at the diverse backgrounds and experiences of my classmates. I have learned a great deal from this interaction in small groups. In addition, I have taken the opportunity on our class breaks to talk one-on-one with some of my classmates. It has been interesting to visit about how the material relates to our current positions, and just to hear about other people's career issues. These small group activities and the interaction with individuals one-on-one have been an added bonus to this HRD course, and I wanted to share that feedback.

3. I think that, because my philosophy places me in these categories as a teacher, I have some difficulties as a learner with the instructional use of television. I think much is learned, both of course content and self, in the interactions in the classroom. With half the class at the remote setting, it is difficult to contextualize the comments and discussions emanating from CoD. I tend to be a "people-watcher," assessing body language along with spoken words. It is difficult to get the whole picture of the person when the individual is reduced to a television image. While I don't think that the level of material is reduced, I do feel that my natural means of processing discussion is somewhat affected.

4. Next, I would like to comment on the distance learning program we are involved in. I have never been involved in such a technically advanced classroom situation, and I feel that it may have tremendous benefits both to the staff and the students. However, I feel that too much time is wasted in the beginning of each session on technical problems. Please don't misunderstand me, I support the use of this system. I would like, however, to see the bugs worked out of it prior to the start of class time.

Site Coordinator's Reaction Paper, Fall, 1995. This dimension reflects empathy, accessibility, and friendliness. For example, I often joined other students during break time, informally addressing questions relating to content or class assignments. Many students would

ask me to convey their questions or concerns to the instructor. Several times students called me at home to clarify assignments or information presented. I strongly feel that, in order to diminish student anxiety and reluctance to inquiry, specific time needs to be dedicated each class session to address student questions and concerns. Students are hesitant to interrupt the instructor with questions, especially if he/she is at a distant site. An argument can be made that all site coordinators, students, and instructors have access to e-mail. In this way, students can maintain an informal dialogue among each other and query the instructor or site coordinator when necessary. In order to practice good andragogy, the site coordinator needs to understand and apply adult learning principles. Adults have a need to learn, and for such learning to be meaningful, learning must be perceived as relevant. Site coordinators have the dual responsibility of empathizing with student concerns while linking content to student need. The site coordinator plays a critical role in supporting a "spirit of mutuality" and friendliness. Adults require a supportive atmosphere when learning. This is an especially important consideration in distance education. I strongly believe that, in order to create a "spirit of mutuality," site coordinators need to work in close harmony with instructors, jointly developing communication and instructional systems focused towards a positive learning culture. Friendliness is the result of working in collaboration with the instructor, as well as having respect and empathy for the adult learner.

Departmental Course Summative Student Evaluations

Evaluation of VTDE Course and Instructor - Spring, 1995. Course effectiveness question: "How would you rate the overall effectiveness of this course?" (five-point Likert scale response). NIU site: n=14; mean=4.36; standard deviation=0.81. CoD site: n=17; mean-4.53; standard deviation=0.61.

Instructor effectiveness question: "How would you rate the overall effectiveness of this instructor?" (five-point Likert scale response). NIU site: n=14; mean=4.50; standard deviation=0.73. CoD site: n=17; mean=-4.50; standard deviation=0.71.

Distance Education Delivery Summative Student Evaluations

This was my first experience of video-teleconferenced instruction (yes - 92%)

This was my first semester of graduate study (yes - 19%)

The on-site staff were helpful (strongly agree or agree = 96%)

The teleconference effectively made up for the absence of the instructor from my site (strongly agree or agree = 69%)

I believe that there was more student interaction at my site when the instructor was present (strongly agree or agree = 88%)

The instructor teaching style, employed through this teleconference medium, facilitated my learning (strongly agree or agree = 92%)

Compared to a regular class, I felt as comfortable learning, using distance education (strongly agree or agree = 73%)

I reacted positively to seeing myself on camera (strongly agree or agree = 58%)

Compared to a regular class, my class participation experience remained the same (strongly agree or agree - 48%)

I found that the technical problems that occasionally occurred disrupted my overall learning experience in the class (strongly agree or agree = 60%)

Overall, this was a positive learning experience (strongly agree or agree = 93%)

Establishing Standards of Effective Practice

Technical difficulties can range from mere annoyances to complete failure of the system; any such difficulty, however, calls attention to itself and thereby detracts from the learning experience. In the event that the whole system, audio and video, failed, each site was equipped by design with a telephone conference call unit to use as back-up. Problems with the video system were the simplest for which to plan because it was a case of all or nothing. If the video failed, the classes would continue on audio-conferencing. If the video encountered a freezing or a tiling problem, it was recognized and apologized for, and classes continued.

Standards for video were established by suggestion and by trial and error. Students commented almost immediately on their discomfort at viewing themselves on the monitor. Some requested that the various handouts be shown on the monitor for ready reference. Other students suggested that they preferred to see the instructor continuously during a lecture/discussion. A solution was to focus one camera on the instructor while the camera at the other site would focus on the handouts.

Among the most troublesome technical problems was the audio interaction. Both class record and students' bi-weekly journals took note of it. It was apparent in the first semester of VTDE delivery that there was not one audio problem, but several.

One problem was overcome by establishing the proper gain on the microphones and the proper volume on the speakers. Another problem was that the settings established by testing before the classes began were inadequate, once the rooms were full of people and background noise. The new settings were quickly determined by trial and error. A third problem was the lack of clarity in the instructor's audio. The audio units would transmit from both sites at once, so the site without the instructor would go on mute while a lecture proceeded, this action did improve audio quality overall, but clarity remained a problem. The microphones would pick up any sound at the site from which the instructor was transmitting. As a solution, a wireless microphone was placed on the instructor and the result was a minimizing of distracting background sounds, but annoying tendency to "clip" the beginning of sentences remained. This problem was solved by once again adjusting the gain control at the bridge to adapt to the new stronger volume of the wireless microphone.

Other audio problems arose from occasional system failure. In this case, the audio conference back-up was employed and classes continued. In addition, a conference bridge service that had been used in the past for audio-conferencing was available; this proved very useful when the first guest speaker was unsuccessful in transmitting through the teleconference bridge. The audio-conference pods once again proved their worth by allowing the guest speaker, who was on the telephone from a hotel, to continue his presentation. The authors recommend that all VTDE classrooms be equipped with wireless microphones for the instructor and that site coordinators be instructed in effective use of the mute function.

A final audio problem relates to differing timbres of male and female voices. The authors speculate that this difference might have implications for the use of desk-top (used at NIU) as opposed to ceiling-mounted microphones (used at CoD). As in every emerging field, VTDE has no shortage of opportunities for research into effective practice.

By presenting this paper at AHRD, the authors hope to encourage others who teach HRD to explore the potential VTDE delivery, and to suggest to active users of VTDE to transform their classrooms into laboratories. Finally, by sharing these results in this forum, it may be possible to build a body of standards for the effective use of VTDE in HRD classrooms.

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The Organizational Ecology of Ethical Problems: International Case Studies in the Light of HPT.

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This article focuses on case studies that reveal the need for more attention on ethics in the international workplace. The researchers examined the question of organizational ecology and its influence on ethical behavior in light of Human Performance Technology.

Human Performance Technology (HPT) and HRD

The International Society for Performance Improvement (ISPI) has always been the organization where HPT and HRD professional practitioners and professors could converse about the influence the enviornment had on shaping behavior vs. the influence training had on shaping behavior. Trainers in Human Resource Development (HRD) would speak boldly about the influence of well-designed training on changing behavior and HPT professionals would speak boldly about how the work environment had more influence on changing behavior. How does HRD (workforce training and development) and HPT (workplace or organizational ecology of performance improvement) support the need for more attention on ethics in international business?

Emerging Ethical And Decision Making Quagmires In The Pacific Rim Economies

The Greeks and Romans fought corruption among government and commerce leaders. Centuries later, civilization still struggles to define what is right and wrong in global transactions. Despite concerted attempts at economic regionalism and unified trade policies (e.g., NAFTA, European Community) consensus on an ethical framework for most businesses, let alone multinational enterprises, is elusive. This is especially true in the environment of steady growth throughout the Pacific Rim, where ethics is almost universally taught in seminaries and private institutions but rarely in business schools. This approach is having an increasingly negative impact. Well publicized embarrassments about bribes in Indonesia, controversial net fishing techniques at sea, safety devices in a chemical plant in India, and corruption or other scandals can cost a Pacific organization dearly when it later seeks to build a reputation abroad.

This paper outlines a series of recent ethical quagmires which have received notoriety throughout the region. It includes an analysis of how Pacific corporations are seeking to define and redefine an ethical framework for their organization. One co-author, who served as a Fulbright Senior Fellow to Japan in the summer of 1994, offers a series of cases of crisis mismanagement and ethical abuse that generated considerable embarrassment for Pacific employers. The other co-author, who has lived for three years in India and Pakistan as a visiting lecturer, offers insight on a paradigm for ethical management in light of HPT.

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Recent Cases Illustrate XXX

• A branch manager for the Commercial Bank of Korea, Lee Hi-do, committed suicide in November, 1992 when it was revealed that he had diverted 85.7 billion won into his personal accounts. More than half of the theft was from Certificates of Deposit which were in the bank's custody on behalf of a client. The Bank, which has been targeted by employees in other cases of embezzlement and extortion in recent years, was forced to issue a public apology for the incident while assuring depositors that it remained fundamentally sound (Cho, 16).
• In Hong Kong, school headmaster Mong Kam-hong was found guilty by a District Court in November, 1992 of having accepted two bribes worth $150,000 from Longman Group Publishing, a major American publisher, in return for his guaranteeing that Longman books would be used in his school. *The South China Morning Post*, in a major analysis, concluded that "the amounts of money involved and the intricacies of those who choose textbooks for the territory's children suggest it could be an established and widespread problem." (Chan, 23.) Mong Kam-hong was forced to pay a series of fines and is currently serving a two-year jail sentence. Longman has since reorganized its entire marketing group throughout the Pacific Rim, but many school systems in Hong Kong, Japan and Korea have expressed public concern over the incident.
• In Japan, several major ethical embarrassments have caused tremors both in government and industry in recent years: a prime minister resigned in 1993 amidst corruption charges; electronic game manufacturer Nintendo was charged by the U.S. government for price fixing in its computer game products, and officials of Hitachi were indicted by a U.S. grand jury for systematically stealing trade secrets from IBM in 1988. (Barton, *Ethics*, 75)
• The FBI has charged that some operatives of the *yakuza*, Japan's organized-crime network, have channeled as much as $1 billion in laundered Japanese money throughout the U.S. in recent years. The agency says that Japanese "executives" have purchased properties in Hawaii, Nevada and California with funds that were either stolen or generated by drug and prostitution operations. (Yamazaki, 11).
• American academics have charged that their Japanese counterparts are unethical in terms of allowing U.S. students access to Japanese universities. According to *The Los Angeles Times*, the U.S. granted 34,657 five-year student visas to Japanese students wishing to attend American universities in 1992, yet only 1,428 Americans were granted similar visas to study in Japan. "We feel there are real inequities and are beginning to view this as a trade issue," said William Sharp, dean of Temple University's Tokyo campus. "We are at a tremendous competitive disadvantage because few of our students can come here to study." (Watanabe, A6).

Is A Consensus On Ethical Behavior Possible?

For decades, Pacific Rim management theorists and sociologists have tried to define a common set of ethical principles that would be acceptable across national borders despite the incredible dichotomy in cultures, history, languages and work ethic that transcend the region. Several media analysts, notably James Fallows, have argued that *all* Pacific Rim corporations, large or small, must create a framework for ethical conduct because their exposure to risk is increasing at such a frantic pace. With each new factory, export program, training program, signing of a lease and shipment. Fallows claims the ability of the employer to control potential misdeeds by managers and workers is incrementally reduced unless management cares enough to intervene with policies and training that bristles with punitive measures for infractions.

Although Tom Donaldson of the Georgetown University in Washington D.C. has identified Fundamental International Rights (1989) and Tom Dunfee of the Wharton School in Philadelphia has identified some Rule of Thumb Principles of International Business Ethics (1991), a common set of agreed upon ethical principles has yet to emerge. Except for of the notion of individual freedom (Chinese students in Tiannamen Square clutched pictures of the Statue of Liberty when they were murdered by government troops in 1989), the Pacific Rim's economic ascendancy is concurrent with a global culture in which certain values and beliefs generate increasing consensus. International corporate "greening" programs encourage environmental responsibility, and an increasing number of multinational corporations have adopted

and enforced codes of ethical behavior. These include Hyundai, Sony, Samsung, Mitsubishi, and Lucky-Gold Star, to name but a few.

Addressing the Ethical Issues

These four issues, sociocultural environment, stereotyping, setting policy, and the criminal behavior and questionable ethics surrounding technology, can be addressed through the work of business ethics researchers and ethicists.

Tom Donaldson (1989) has identified what he refers to as international rights. Where these rights are respected, the sociocultural environment can sustain long term international business relationships.

1) The Right to Freedom of Physical Movement.
2) The Right to Ownership of Property.
3) The Right to Freedom from Torture.
4) The Right to a Fair Trail.
5) The Right to Nondiscriminatory Treatment (Freedom from discrimination on the basis of such characteristics as race or sex).
6) The Right to Physical Security.
7) The Right to Freedom of Speech and Association.
8) The Right to Minimal Education.
9) The Right to Political Participation.
10) The Right to Subsistence.

Leon Sullivan, (In Beauchamp and Bowie, 1993) writing on doing business in South Africa, established a set of principles that would help businesses and their employees avoid some of the stereotypes that negatively influence the outcomes of business transactions or inflict harm on the members of the transaction. These principles include:

1) Nonsegregation of Different Races or Ethnic Groups.
2) Equal and Fair Employment Practices Instituted for All Employees.
3) All Employees Doing Equal or Comparable Work for the Same Period of Time Receive Equal Pay.
4) Members of All Racial or Ethnic Groups Should Be Trained for Supervisory, Administrative Technical and Clerical Jobs.
5) Management Jobs Should Be Shared by Members of All Racial and Ethnic Groups.
6) Quality of Employees' Lives Outside the Workplace Should Be Improved.

Tom Dunfee (1991) suggests principles of international business that imply unwritten, social contracts among the members of the international business community. These principles should guide the establishment of policy related to doing business in the global market place. Although Dunfee does acknowledge that some individuals and organizations will choose to ignore these principles, he believes that following them can maximize the efficiency of international business by reducing transaction costs in the long run, in other words, that good ethics is good business. Dunfee's principles include:

1) Honor Confidentiality. Where failure to honor confidentiality becomes the norm, firms incur substantial costs in guarding against unethical disclosures of new designs, marketing plans, research findings, business deals or mergers.
2) Avoid Actual Conflicts of Interest. Conflicts of interest occur intentionally when parties of a transaction act to further their personal interests or fail in their duty to the other parties. Frequently parties in a transaction find themselves confronted with a potential conflict of interest not of their making. Several steps can prevent the situation from escalating:
   a) full disclosure to all parties involved
   b) certification of the fairness of the transaction by a truly independent party
   c) complete deferral of the decision to someone else who would be perceived as, and is totally independent. (Dunfee, 1991)

3) Act in Good Faith. Honesty in negotiations and fairness are increasingly expected in the global marketplace. Dunfee asserts that business people are showing a willingness to take their business elsewhere when they are not treated in good faith.
4) Exercise Due Care. This principle relates to individuals being held accountable for the way they conduct business, and the standards at which they fulfill job expectation.Other of Dunfee's principles are related to broader social.
5) Respect the Liberty and Rights of Others.
6) Respect for Human Well-Being.
Dunfee's last principle relates to legal issues.
7) Willingly Comply with Law.

Ethical decision making models have been designed to guide decision makers in business and industry through ethical issues. Their purpose is to ". . . present ethical systems and methods of reasoning that deepen one's understanding of a situation, identify relevant moral concerns, and provide a means of evaluating actions and policies" (Baron, 1991, p. 803.).

There are many different models in the literature. Most, however, contain the same basic processes represented in Werhane's (1992) seven-step process for ethical decision making. The steps of the process include:

1) Identify the Relevant Facts. Key factors that shape the situation and influence ethical issues must be identified.
2) Define the Ethical Issues. All issues related to the situation must be identified and the ethical issues separated from the non-ethical issues. Issues may be identified at all levels of the organization.
3) Identify the Primary Stakeholders. Those individuals and groups involved in the situation that will be affected by a decision are the primary stakeholders. The impact of a decision on them must be considered
4) Determine the Possible Alternatives. All alternative interventions need to be identified.
5) List the Ethical Implications of Each of the Alternatives. Each alternative needs to be evaluated according to the impact on the stakeholders and the three ethical theories. The following decision tree can guide this evaluation.
6) List the practical constraints. Any factors that might limit the implementation of alternatives or render it too difficult or risky must be identified.
7) Determine what actions should be taken. After weighing the information provided in steps one through six, an alternative needs to be selected and an implementation strategy identified.

Ethics and the Performer

Put an ethical performer in an environment that doesn't support ethical performance and the ethics in performance will begin to slip. Research has shown that the majority of employees are committed to standards of high ethics (Aresty Institute of Executive Education, 1988), but if the environment (workpace ecology) doesn't support ethical decision-making then employees are less confident about making the right decision. Managers are uniquely positioned to engineer the work environment and need the knowledge of HPT to create an organizational ecology that supports ethical performance.

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Assessing Performance In HRD Practices: A Look At Latham And Saari's Situational Interview

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The present study describes the development and application of the Situational Interview for the purpose of managerial candidate selection in a multi-site organization. The procedure is based on job-relevant behaviors which are incorporated into a series of interview questions, each provided with behaviorally anchored responses, enabling more objective judgments. The interview process is both standardized and job-related, characteristics reported in the literature as important to the legal court system. Results suggest that the process is content valid, and interrater reliability and user satisfaction are reported. Applications of the process in Human Resource Development are suggested.

Human Resource Development professionals are involved with training, education, employee-development, organization development, and career development in the quest for improved organizational effectiveness. These processes require learning and change (Rothwell & Sredl, 1992). Assessments and evaluations are essential tools in order to measure the needs, the progress, and the success in these learning and change programs. It is all important that any assessment tool be reliable and valid. The situational interview (Latham & Saari, 1980; 1984) has been used in assessing potential performance for selection purposes and it has been shown to be valid for this utilization. The situational interview's successful use in assessing potential performance makes it a potential candidate for broader application in HRD processes such as needs assessment for training program development, selection for training programs, evaluation off learning and training, and performance diagnosis and analysis.

Review of the Situational Interview and Selection

The selection of human resources is a primary task in an organization. Schmitt and Noe (1986) report that the goal of employee selection is the prediction of employee performance. This desired outcome is traditionally important, but would appear to be a fundamental objective in a performance based organizational competing in a rapidly changing global market. While many different selection tools are utilized, the selection interview remains the most frequently used method despite findings of low reliability and validity (Latham & Saari, 1984; Latham et al, 1980; Harris, 1989). However, the literature suggests findings of increased validities in interview selection procedures using a situational or structured interview format (Schmitt & Noe, 1986; Latham et al, 1980).

The situational interview as developed by Latham, Saari, Pursell and Campion (1980) is grounded in Locke's (1968) goal-setting theory. It is based on the hypothesis that

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intentions are good predictors of behavior. It is a standardized interview process which poses a series of hypothetical work situations to the interviewee and asks how he/she would respond in each situation.

The items are job relevant and based on job analysis. Arvey and Campion (1982) suggest the importance of basing an interview's content on a job analysis for the purpose of potentially increasing the validity and reliability. In order to standardize the process the same items are presented to every job candidate. Each item is accompanied with behaviorally anchored responses to be used in rating the interviewees' responses. These benchmarks are developed by job experts for the position framed by the interview.

The job-relatedness and the standardized format are important in developing a selection device which is more legally defensible. Campion, Pursell and Brown (1988) report that both the Uniform Guidelines and the Validation Procedures advocate the grounding of a selection device on the results of job analysis. The same researchers suggest that situational questions which provide sample situations, may provide content and face validity, and may show criterion-related validity.

Researchers sometimes present ideas for improving Human Resource practices which have limited applicability in practice due to time and/or cost deterrences. An examination of the Situational Interview format as prescribed in the literature by Latham and Saari suggests that the development of the interview program is straightforward and feasible.

Development and Validation of a Situational Interview Format

A study was undertaken to develop a tool to evaluate performance potential, and its intended use was in a selection situation by a large multi-site retail business organization. The purpose of the selection device was to screen candidates for a six month managerial training program which would lead to placement in management positions. The device was to be used in college recruiting and interviewing which accounts for the majority of the personnel selection. It was also to be used for walk-in candidates who typically have industry experience.

An examination of the current organizational interview procedure revealed that the process was only partially standardized which allowed for increased subjective judgments, and that it was not job related. A joint decision was made with the organization's Training and Development department and organizational interviewers to develop a situational interview program. The following is a description of that process.

The development of the interview format closely followed the procedure as presented by Latham, Saari, Pursell and Campion (1980). The foundation for the procedure is a job analysis. This was undertaken through the use of personal interviews with current site general managers and upper level corporate managers. As job experts, these managers were asked to describe the behaviors, skills, abilities, and characteristics of both ideal (good) and poor managers. The behavioral descriptions generated were then grouped by similarity into classifications by graduate students in an Industrial/Organizational psychology program. This process resulted in six dimensions designated as: Management of Policy, Management of Employees, Personal Characteristics, Employee Relations, Public Relations, and Job Involvement.

Management of Policy refers to the ability to follow instructions, organizational procedures, and the directives of supervisors. Management of Employees relates to the ability to treat all employees impartially, to delegate authority equally, and to make objective decisions. Employee relations includes the ability to interact with employees consistently, to treat employees with respect, and to listen and respond to employees' suggestions and comments. Public relations pertains to the ability to interact with customers in a professional, responsible, and courteous manner. Job involvement consists of the degree to

which an individual identifies with and cares about his or her job.

The dimensions and the included behaviors were next distributed to a second group of manager-job experts who were asked to evaluate the groupings and to make changes and additions which they thought important. The six dimensions were rated as representative of the managers' positions. Observations made of the current interview process revealed that few, if any questions were being asked which directly tapped these six managerial dimensions.

Situational questions were developed based on the job information provided by managers. Anchors, which serve as illustrative examples of above-average, average, and below-average responses, were developed utilizing the experience of the organizational interviewers who all had been site managers. The questions were presented to a panel in order to determine if the items were understandable. Vague or confusing terms were changed based on suggestions.

In a typical situational interview format each question presents a hypothetical but realistic job situation. The questions are developed using different types of hypothetical jobs and situations which can be responded to by an interviewee without requiring prior training. The candidate responds by explaining what he or she would do in each situation given. Each response is evaluated on a scale from 5 through 1. Each question is accompanied with a set of illustrative anchors which are examples of above-average, average, and below-average responses (see Exhibit 1: non-proprietary parallel item). The anchors are to be used by the interviewers as guidelines in judging the quality of the response given by the candidate to a particular question.

EXHIBIT 1
Illustration of a Typical Situational Interview Question and Anchors

Question: You are the manager of a hardware store. A customer who had purchased a gallon container of customized color-mixed paint approaches you. In a loud voice he complains that the color was not to his liking and that it was overpriced. You notice that the gallon paint can is almost empty. What would you do in this situation?
Anchors:
(5) Apologize. Offer to replace the gallon can of paint or offer a refund. Be receptive to the customer's comments.
(4)
(3) Be receptive to customer's comments, but do not offer a replacement or refund. Explain the costs of custom mixing paint if appropriate to situation.
(2)
(1) Tell customer that price is appropriate. Point out that the paint had been almost completely used, and therefore assume that it must have been acceptable. Take no other action (do not offer replacement).

In this example an above-average response indicates the philosophy that the customer is always right, with the manager taking responsibility for the customer's dissatisfaction. An average response indicates that the manager is attentive and courteous, but instead of accepting responsibility he offers justifications. A below-average response indicates polite detachment on the part of the manager.

In the next stage, a series of mock interviews were conducted to test the developed items. Two sample groups of randomly selected interviewees were used. The first group consisted of juniors and seniors in a university Business Administration program who were representative of the typical candidate which the organization interviews during college

recruitment. The second group consisted of individuals who were current members of the management training program and who were chosen as a comparison group because of their status as current managerial candidates. The interviews were conducted by graduate students and were tape recorded. At the conclusion of each individual interview session the subjects were asked open-ended questions in order to obtain feedback about the interview format. The recorded interviews were then submitted to each of the organization's interviewers who rated each interview using the behaviorally anchored rating scale.

It is important that interviewers are trained and that they understand the interview process. Therefore a brief manual was developed for this purpose.

Results

The organizational interviewers' evaluations were statistically analyzed using repeated measures analysis of variance. Results indicated that the items were able to significantly differentiate the quality of responses given by the two groups of interviewees for two of the three interviewers. A subsequent conversation with the third interviewer revealed that the interviewer had a problem understanding a few of the tape-recorded items and admitted becoming impatient. Intraclass correlation indicated there was interrater agreement ($r = .81$) in the evaluation of the interviewees by two of the judges, that is, they were rating the same individual in an equivalent manner. The third rater, who admitted becoming impatient with some of the recorded interviews, had a lower interrater agreement with the other two judges ($r = .49$). Ten items were identified as being the most effective of eighteen items tested. All dimensions except Personal Characteristics were represented by the ten items selected for the final interview format.

Feedback from the subjects was positive about the situational interview format. The interviewees were comfortable with the items, understood what was being asked and needed infrequent repetition of an item. They liked the fact that the items related to the job in question and felt that this face validity affected their motivation to respond. Nine-five percent of the interviewees reported that the questions were realistic. In addition to the experts who provided information for the dimension and item development, the subject group consisting of the current managerial candidates reported that the interview items validly reflected the content of their positions.

Limitations

The limitations of the study include the small test sample size: twenty interviewees were used in the mock interviews and the organization has only three interviewers who are responsible for all interviews. The impatience on the part of one of the organizational interviewers appears to have affected his evaluations of the recorded interviews. It does, however, emphasize the importance of rater attentiveness during the interview process. In addition, the interview questions were developed based on the job analysis in one organization for which the format was developed. However, the development process demonstrated that a recommendation founded in the research literature was able to be successfully developed in a straight forward manner in order to enhance the Human Resource responsibility of employee selection.

Implications for Human Resource Development Practices

The interview is the most commonly used tool for information gathering purposes by individuals and organizations (Zemke & Kramlinger, 1982). This trend continues despite the poor reliability and validity reports for interviews (Latham & Saari, 1984; Latham et al, 1980; Harris, 1989). However, as stated previously, the situational interview is reported to increase the reliability and validity for the technique (Schmitt & Noe, 1986; Latham & Saari, 1984; Latham et al, 1980). Most organizations rely heavily on the interview for selection purposes, but the potential for use is broader than selection. The situational interview has conceivable applications in HRD practices.

The situational interview could effectively be used in needs assessment at the individual level to determine training needs. The individual's responses to interview items could effectively be used to reveal gaps between the determined ideal performance and job knowledge, and that of the individual. The specific-area gaps could be used in determining training needs. The situational interview could also be used to evaluate transfer of training. This could be done alone or in combination with the more traditional transfer of training survey. The results would provide information to serve as the basis for problem solving sessions, related to both the individual's assimilation of the intended skills and knowledge, and to training program inadequacies. While interviews are currently established as a technique for program evaluations, the situational interview might improve the reliability and the validity when used for this purpose. Philips (1991) suggests that some individuals may be willing to discuss evaluations with a skillful interviewer, while the same information would not be revealed in a questionnaire. The behaviorally anchored situational interview could be used in conjunction with other evaluation instruments to obtain information which is more than affective in nature. The situational interview's foundation is a job analysis. The items are structurally based on this information, and the value for assessment and evaluation uses is the recycling of the job relevant feedback into the performance system by HRD professionals to improve practices affecting organizational performance.

Summary

The goal of this paper was to provide information related to the development and application of the Situational Interview. The basic value of any information gathering technique is the reliability and validity of the information provided by that tool. The situational interview has been reported to increase these indices when used for selection purposes. In addition, the technique appears to have other applications important to Human Resource Development as suggested.

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Customer Satisfaction and Training Program Quality

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Many authors in the field of quality management stress the importance of customer satisfaction. Meeting customer requirements is conceived of as an important indicator of quality of a product or a service (Juran, 1992). Scholars in the field of HRD however, stress the importance of achieving performance improvement (Swanson, 1994). They contend that HRD interventions should have impact on the organisation, or effects on business results. The indicators of training effects that are meant here, are defined on a higher system level. This means that reactions of recipients of training services are perceived as being less important than improvement of expertise, transfer of expertise to the job, and attaining business process targets.

Commercial training organisations need to provide their services in such a way that their clients will be satisfied (Zeithaml, Parasuraman and Berry, 1990). Satisfied clients are in fact an essential condition for the continuity of these organisations (Hayes, 1992; Juran, 1992). If many clients of an organisation would be dissatisfied, that organisation would be out of business very soon. The clients would simply buy their services from a competitor (Thomassen, In 't Veld and Winthorst, 1994). Measuring customer satisfaction therefore is very important for training organisations, especially when these organisations are big, and the management of the training organisations does not know all projects and clients. Measuring customer satisfaction is part of several total quality management approaches. For instance, within the method called 'Towards continuous quality improvement' (CEDEO, 1993), 'satisfied clients' is one of the nine components for quality evaluation The weight of this component in the whole model is twenty per cent. During the last decades, measurement of satisfaction with training events is critiqued. Various authors have developed strategies to evaluate the effectiveness of training programs (Brinkerhoff, 1987; Bramley, 1991; Basarab & Root, 1992). The critiques are justified, as in training projects impact on the higher levels Kirkpatrick distinguished already in the fifties (Kirkpatrick, 1994) ,or performance improvement (Rummeler and Brache, 1990), is the ultimate goal. Satisfaction of the recipients of training is not enough. Learning results, changes in the work behavior, and organisational improvement need to be achieved. And this needs to lead to improvement of the performance of individuals, teams, and organisations (Swanson, 1994). In this study, customer satisfaction of training programs is defined as the degree to which clients of training organisations are satisfied with the performance of the training organisations in three stages of the training process: the before-training, the during-training, and the after-training stage. The training programs that are meant here are offered by training vendors in the field of management, communication, and employee participation. They are mainly group-oriented instructor-led customised training programs. But there are also individual training programs included in the study. The individual training programs are aimed at language training and individual coaching mainly.

The Department of Curriculum of the University of Twente has conducted a project in which the customer satisfaction about training projects has been measured. This project is conducted for the Dutch Association of Training Organisations, which comprised about 45 independent commercial training organisations. These organisations vary in size and number of customers. Small organisations employ only some trainers/consultants and have a limited number of clients. Big organisations employ about 150-200 trainers/consultants, and have hundreds of clients for the training projects mentioned. The project was aimed at measuring the customer satisfaction with training projects, in which the customer

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requirements were the focus of the whole training process. The total number of these projects exceeds 6,000 per annum, and about 100,000 trainees are enrolled in these projects. The purpose of this project was to improve the system of customer satisfaction research that was in operation, and to integrate impact measurement in the system under the constraints of a limited budget and full-scale application of the system.

The results of the evaluations, which took place during 1993 and 1994, were reported to the training organisations. These organisations use the results for internal quality management. Some of the organisations use the data for bench-marking purposes (Camp, 1989). The association uses the system as a whole for quality assurance.

Research Question

As has been mentioned above, there was only a limited budget for conducting the evaluations, and the intention was to measure the customer satisfaction on a large scale, which means that the research instrument and procedure needed to be as efficient as possible. On the other hand we thought it was necessary to include a component of impact measurement in the instrument. This was a real challenge, as dedicated impact measurement necessitates criterion-referenced measurement, which under the given constraints was impossible to include in the evaluation system. Therefore a straightforward set of questions was included in the research instrument on the objectives of the project, the responsibilities of reaching these objectives, the level to which the objectives were reached, and the attribution of results to the training organisation (the results question will be elaborated in the next section). One can ask whether this additional component has added value for the evaluation system, or whether mere customer satisfaction research would yield enough information on training project quality. Based on theoretical insights we think that impact is an important characteristic of training project quality, and that satisfaction with the training process is not enough to warrant this impact. Therefore, the research question in this study is: is satisfaction about training projects an indicator for the impact of the training projects? If this would be the case, standardised impact measurement could be left out of the evaluation system, and customer satisfaction data about the training project would be sufficient. This would make the evaluation system less complicated, more easy to implement, and therefore cheaper. We, however, expect that customer satisfaction is an insufficient indicator of training impact, and that impact research needs to be integrated in customer satisfaction evaluation.

Methodology

In this section we will describe the methodology used in this study. First of all we will describe the persons that participated in the study, next the training programs that are evaluated, than the procedures, and finally the reliability of the data.

Participants The participants in the study are customers of training organisations. They contract the training organisations, specify the training needs, and co-ordinate the training project within the client organisation. In some instances customers are also participating in training projects. In all cases they are the persons who are best informed about the whole training project, and who are in the best position to answer questions about the training projects. About a quarter of the customers hold line positions in the client organisations (as director or line manager), and about three quarters of them are staff employees (in human resource management and development departments). The participants were asked to cooperate in the study on a voluntary basis. The training organisations expressed the importance of the study and stimulated their clients to participate.

Training Programs About two thirds of the training programs were in the field of management and communication, 15% in the field of commerce, 9% in languages, and 7%

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in employee participation; 5% of them were in marketing, engineering, and human resource development together, and 17% of the projects could not be categorised in one of these groups. The total amount of percentages exceeds 100%, as the customers could categorise a project in more than one group. Most of the projects have been carried out once (51%), 21% were carried out twice, 7% trice, and 13% more often; of 7% of the projects is was not known how many times they were carried out. The average number of days the projects lasted was 6, and the average number of participants per project was 23.

Research Instrument A written questionnaire has been developed. For the part on satisfaction with various factors of the training projects, the questionnaire includes a selection of indicators that are common place in the literature on human resource development (Andrews and Goodson, 1980; Romiszowski, 1981; Goldstein, 1986; Camp, Blanchard and Huszczo, 1986; Brinkerhoff, 1987; Swanson, 1994; Rothwell and Kazanas, 1994).

The indicators of customer satisfaction are divided in the three stages of training projects that have been mentioned before. The indicators, and their meaning in the training process, are the following:

Stage I: Before Training

Target group. The right persons need to be selected for participating in the training program at the right time, and this target group needs to be prepared for the training program. The participants are the recipients of the training program.

Needs. The training program has to be focused on the learning needs of the target group. These needs can be specified in terms of types of knowledge, skills, and attitudes (KSA's). The KSA's need to be linked to the performance targets and the performance requirements of the target group.

Design. The design of the program needs to be aligned to the learning needs on the one hand and the contextual constraints on the other hand (Romiszowski, 1981). The design of the program comprises statements and specifications about the objectives of the training program (why are we organising this program? what do we expect of it? what are the results we want from this program?), the content of the program (what is the program about? what problems, topics, issues will be touched upon?), the organisation of the program (what needs to be done? when? where? how? with what? with whom?), and the evaluation of the program (how do we measure the results? how good have the results to be?). These four components of the program design need to be coherent.

Stage II: Training Implementation

Materials. All materials such as course descriptions, instructional materials, instructional media, and trainer's guides, should be linked to the design of the program. Furthermore, they should be appropriate for the target group, and meet the needs of the learners.

Trainers. The trainers or instructors should focus on the needs of the target group, and they should create learning processes that are coherent with the program design. They need expertise that is required to teach the given course.

Program time. This is one of the most important organisational characteristics of training programs, as it determines the amount of time the target group needs to devote to the program. This learning time is one of the major cost factors of training programs.

Stage III: After Training

Evaluation. The evaluation is an integrated part of any systematic training effort. Without a sound evaluation of the results, it is very difficult to get valid feedback to the stakeholders. As such it is an essential part of any in-company training program, though profound evaluation of effects of training programs is more often the exception than the rule.

Coaching of usage. When employees have acquired new skills, knowledge, and/or attitudes, it is essential that they use these on the work-site. All too often effective usage is disrupted by destructive learning processes that occur during re-entry at the work-site. to prevent this from happening, coaching is helpful to facilitate transfer of learning (Broad & Newstrom, 1992) to short and medium term job performance.

Final report/meeting. The training organisation wants to inform the client organisation about the results of the training program. They also want to share the more and less positive experiences the persons involved had with this program. It is a reflection about the strong and weak points of the program, and in a final meeting these reflections can be exchanged. Furthermore, the parties involved can make arrangements for follow-up activities.

A five-point scale is used to measure the extent to which the clients of training programs were satisfied with these indicators.

For the part on the results of the training projects, one question was included in the questionnaire. This question is based on the work of Kirkpatrick (1994), and reflects results measurement on level 2, 3 and 4. The question is: 'To what degree are the objectives of the training project achieved?' The respondent than has to answer three items:

a. attainment of learning results;

b. improvement of job performance in work situations;

c. support of organisational change.

The answering categories are: not applicable, not yet known, not at all, about a quarter, about a half, about three quarters, and completely.

Procedures For the purpose of this study a sample is drawn from a population of 10,144 projects. The sample size was 2,174, and the response group size was 1,403, which is 65% of the sample.

The customer of the selected projects received a printed questionnaire with the request to complete the questionnaire to prepare a telephone interview by the data collection staff members. A panel of research assistants called the customers. A standardised text was provided to explain the question and answering categories in the questionnaire, if that was needed. In some cases the interview was conducted, but in most cases the customers returned the completed questionnaire by post.

Correlation analysis is performed to show the relationships between satisfaction on the training projects, and the impact of the projects. Subsequently a selection is made of the projects. Based on the question as to the importance of the project objectives (concerning learning results, job performance, and organisational change) and the question as to whether agreements were made for the training project factors, three groups were composed. These groups of training programs are predominantly aimed at achieving learning results, changes in job performance, and organisational change respectively. For these projects the relationships between satisfaction and impact are tested separately, with a correlation analysis. A preliminary Lisrel analysis is performed to evaluate the latent structure of the variables that are distinguished in the study.

Reliability. Earlier research was conducted to study the reliability of the data (Mulder, Van Ginkel and Nijhof, 1994). In that study three reliability tests were performed: a non-response analysis, a test-retest analysis and a inter-rater analysis. The non-response analysis showed a maximum difference between respondents and non-respondents of .33 on a 10-point scale of total satisfaction with the project. The maximum difference scores on this scale for test and retest scores is .27, and for first and second raters .57. We concluded that the reliability of the data was satisfying.

Results

Pearson correlation coefficients are computed for the relationships between the results of the training projects (learning results, change in work behavior, and support of organisational change), and the satisfaction about the training project factors. The results show that all correlation coefficients are statistically significant. The mean values of the correlation coefficients for 'learning results', 'work behavior', and 'organisational change', are .3267, .2244, and .1970 respectively. All are less than .40, and Phillips (1991) contends that such values are low.

The results of the preceding analysis are independent of objectives at which the projects are aimed, and agreements that have been made about the training project factors between the training and the client organisation.

Questions on these issues are included in the questionnaire, however, and data on both variables is available. The cases are grouped according to their focus: achieving learning results, changed work behavior or support for organisational change.

Table 1. Correlation Coefficients between Results of Training Projects by Training Program Factors by Groups of Training Projects that are aimed at achieving Learning Results (Group 1), Change in Work Behavior (Group 2), and Support of Organisational Change (Group 3)

	Group 1 Learning results	*Group 2 Work Behavior*	*Group 3 Organisational Change*
Target group	.2297 (158) P=.004	.1055 (181) P=.158	.2851 (105) P=.003
Needs analysis	.3526 (182) P=.000	.3202 (196) P=.000	.3109 (112) P=.001
Design	.3356 (174) P=.000	.2609 (216) P=.000	.2435 (113) P=.009
Materials	.1623 (168) P=.036	.2227 (190) P=.002	.0948 (103) P=.341
Trainers	.3383 (177) P=.000	.3348 (217) P=.000	.2351 (113) P=0.12
Program time	.3222 (202) P=.000	.2468 (229) P=.000	.1414 (118) P=.127
Evaluation	.3207 (149) P=.000	.4116 (188) P=.000	.1481 (102) P=.137
Coaching of usage	.2164 (69) P=.074	.3204 (84) P=.003	.2064 (61) P=.110
Final report	.2882 (134) P=.001	.3419 (158) P=.000	.2339 (82) P=.034
$Mean_R$	.2851	.2850	.2110

As to the selection of projects with respect to agreements made between the partner organisations, those cases were selected for which the respondents stated that agreements were made about the factors of the training projects (the nine factors in the before-during-after the training stages).

As to the grouping of projects with respect to their focus on learning results (LR), changed work behaviour (WB), and support of organisational change (OC), the following grouping rules were applied:

- group LR: ((goal LR GE 4) and ((missing (goal WB) or (goal WB LE 3)) and (missing (goal OC) or (goal OC LE 3))).
- group WB: (goal LR GE 4) and (goal WB BE 4) and (missing (goal OC) or goal OC LE 3))).
- group OC: (goal LR GE 4) and (goal WB GE 4) and (goal OC GE 4)

In Table 1, the correlation coefficients (Pearson) between the results of the training projects (learning results, change in work behavior, and support of organisational change) and the satisfaction about the training project factors are depicted. The column correlation coefficients are values for the three categories of project results, the row correlation coefficients are values for the satisfaction on training project factors. The first three factors (target group, needs analysis, design) pertain to the before-the-training stage, the second three (materials, trainers, program time) to the during-the-training stage, and the third three (evaluation, coaching of usage, final report) to the after-the-training stage. The bottom row depicts the mean correlation coefficients for the columns. The computation of the coefficients is done independently for each pair of variables. Listwise computation would lead to a significant decrease of cases. For each training project factor the value of the correlation coefficient is printed on the first line, the number of cases (training projects) on the second, and the probability level on the third.

Many relationships are statistically significant. And again, the values of the correlation coefficients are weak. The average correlation between the groups and the training project factors are more homogeneous than for all projects together. But the trend is the same: the average correlation between the learning results and the training project factors on the one hand, is higher than the average correlation between the 'organisational results' and the training project factors on the other hand. The average correlation between the 'work behavior' and the training project factors lies in between both others.

The conclusion therefore is that satisfaction with training project factors is something different than project results. And the satisfaction measures are no good indicator for that achievement of project results. This conclusion underlines the necessity of maintaining the measurement of results as a component of the whole evaluation system. Measurement of project results, namely, does provide different information than measurement of project satisfaction. So the results call for a combination of both the marketing aimed measurement of customers satisfaction on the one hand, and the performance aimed measurement of results on the other hand. This conclusion is strongest for the results about 'organisational change', and relatively less for 'work behaviour', and least for 'learning results', but these are only gradual differences. The main conclusions remains that based on the magnitude of the correlation coefficients, project satisfaction is a limited indicator for project results.

In this paper we have reported on data that have proven to be reliable. The research project will continue during the year 1996, and 1997. Along the 'regular' collection of data with the standardised research procedure and instrument, we want to conduct a few in-depth studies to test the validity of the data.

First of all, for a selected group of projects, training organisations will be asked to provide evaluation data. These data will be contrasted with the data provided by the client organisations.

Secondly, the sources of information on which respondents base their answers on the questions in the inventory will be evaluated. These sources will vary as to the rigor with which training projects are evaluated. We expect that some respondents have based their answers on subjective experiences with the projects, whereas others will have based them on internal performance evaluation data.

Thirdly, the participation of the respondents in the total training project will be examined. Again, this may show considerable variation. Some respondents may be the

contractor and final responsible officer for the project. Others may be staff personnel, and still others may even participate in the training itself. These different participation levels may lead to different perspectives on the project, and at least a different level of depth of information about the project's characteristics and success.

Fourthly, the standards of satisfaction and results orientation of the respondents will be evaluated. These standards usually vary (De Ruyter, 1994). Certain training organisations state that because of their quality training programs, but also because of the educational and functional level of their clientele, respondents are more critical than others. The bias this is causing will be examined.

Fifthly, in the customer satisfaction research system that is employed in this study, measurement of the impact of the training programmes is standardised. It would be better to use a criterion oriented (Shrock and Coscarelli, 1998) performance assessment system. This, however, requires customised questionnaires, including performance objectives that pertain to the content of the projects. It would also be preferable to include hard data in the evaluation system were possible. This approach is being tested in an effectiveness evaluation study currently, but it appears that this approach is much more time consuming, and therefore more costly. In the validity test some projects will be evaluated this way, however, specific performance objectives will be specified and assessed, probably with behaviorally anchored rating scales (Mills, Pace and Peterson, 1988). Multi-rater measurement methods will be used, jury's alphas will be computed to check the reliability of the data, and the results of these measurements will be combined in a constructed indicator for effectiveness. The value of this indicator will be compared with the results scores resulting from the standardised evaluation system. This comparison will enable a rigorous conclusion as to the validity of the results data in this study.

Finally

In this study the different relationships are tested separately. It would be interesting to combine the analyses in one comprehensive model. Currently we are testing a causation model with a Lisrel analysis. Latent variables we distinguish are Project Definition, Project Implementation and Training Effectiveness. A first analysis resulted in a perfect fit (χ^2 = 0.57; df = 41; p = 1.00). But corresponding with the previous results, the covariance matrix of latent variables shows an R^2 of 0.35 only for project implementation and training effectiveness. The R^2 for project definition and training effectiveness is only 0.03. The R^2 for project definition and project implementation is 0.14.

Further analysis of the data showed that due to the skewness of the distribution of many variables, the tests that are performed have limited power. We are currently looking for a more sophisticated combination of parts of the dataset, to achieve more sensitive values of the predictor and criterion variables. We expect that this approach will result in a stronger confirmation of the hypothesised relationships.

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DACUM, TRAINING, AND ISO 9000

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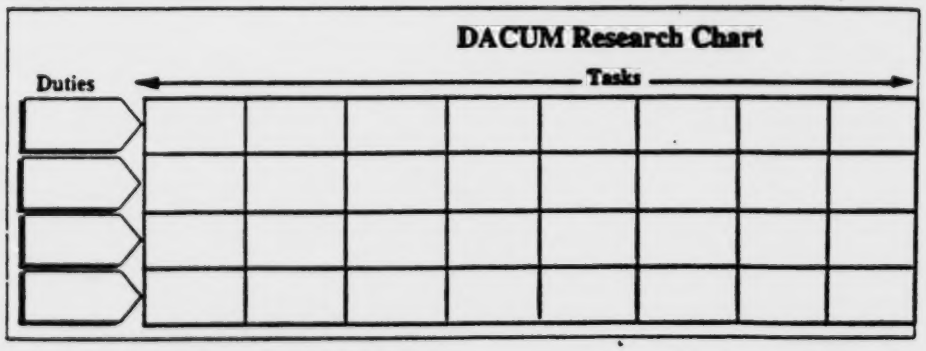
While DACUM has proven to be a widely used and highly effective means of conducting job, occupational, and process analysis, there has been little information available that identifies the knowledge, skills, and attitudes important to DACUM facilitators. Many companies, colleges, and government agencies are requesting relevant, high quality training of their personnel in the DACUM facilitation process. This study describes how the tasks important to DACUM facilitators were identified and verified on an international basis. The tasks identified and their ratings of importance and learning difficulty provide a basis for data-based planning of DACUM facilitator training programs.

Problem Statement

As a manager, trainer, or curriculum specialist working in human resource development, you need to know exactly what is required of your employees at the work site. You need to be able to conduct effective, low cost, and time-efficient occupational analysis which can be used for instructional program planning, training materials development, organizational restructuring, employee recruitment, training needs assessment, meeting ISO 9000 standards, career counseling, job descriptions, competency test development, and other purposes.

The DACUM (Developing a Curriculum) process for occupational analysis involves local men and women with reputations for being the "top performers" at their jobs, working on a short-term committee assignment with a qualified DACUM facilitator. Workers are recruited directly from business and industry. These workers become the Panel of Experts who collectively and cooperatively describe the occupation in the language of the occupation.

The Panel works under the guidance of a trained facilitator for two days to develop the DACUM Research Chart. The chart contains a list of general areas of competence called DUTIES and several TASKS for each duty. Brainstorming techniques are used to obtain the collective expertise and consensus of the committee. As the Panel determines each task, it is written on a card. The cards are attached to the wall in front of the Panel. The completed chart is a graphic profile of the duties and tasks performed by successful workers in the occupation.



It is widely accepted by educators and business-industry trainers that DACUM is a very effective, quick, and low cost method of job/occupational analysis. What was not known was

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what competencies (knowledge, skills, and attitudes) are required of the successful DACUM facilitator. Obtaining a thorough and valid answer to this question is very important and useful to personnel at The Ohio State University and other agencies who seek to provide high quality training for DACUM facilitators. This paper explains how an international DACUM workshop and an international task verification survey was used to answer the question of what competencies are required of successful DACUM facilitators. The findings provide valuable data for planning and conducting DACUM facilitator training programs.

Research Questions

This research sought to answer three major questions:

1. What duties and tasks must be performed by DACUM facilitators?
2. How important is the performance of each task identified to DACUM facilitation?
3. How difficult is it to learn how to perform each identified task?

Methodology

To identify the duties and tasks that must be performed by DACUM facilitators, it was decided to conduct what could be called a "DACUM on DACUM" occupational analysis workshop. At a December, 1994 international meeting of experienced DACUM facilitators, a group of seven persons were selected and convened as a DACUM panel. One person, who had facilitated over 50 workshops, was selected as the facilitator. Four panel members were from the United States and three were from Canada. One person represented human resource development (HRD) in a large Canadian Steel Company.

To obtain rankings of importance and rankings of learning difficulty for each task, a national task verification survey was conducted. Respondents were asked to rate the importance of each task and its learning difficulty on a six-point Likert type scale from 0-5, with zero being the least important/least difficult and five being the greatest importance/extremely difficult. A list of 70 persons known to have received training and to be active as DACUM facilitators were sent the task verification survey in April, 1995. By the time the data was analyzed in September 1995, 42 persons had responded. Means were computed on each task for importance and difficulty.

Findings and Conclusions

By means of the DACUM workshop, eight duty areas and 87 different tasks were identified. The duty areas were as follows:

Duty A =	Market the DACUM Process
Duty B =	Plan the DACUM Workshop
Duty C =	Recruit DACUM Workshop Committee
Duty D =	Orient the DACUM Committee
Duty E =	Manage the Group Process
Duty F =	Facilitate Chart Development
Duty G =	Verify DACUM Results
Duty H =	Coordinate Post-DACUM Activities

Responses to the ranking of tasks on importance and learning difficulty are presented in Table 1. The highest ranking of importance was given to Task D-10, Instruct committee

TABLE 1
DACUM FACILITATOR TASK VERIFICATION REPORT

	Importance of Task	Task Learning Difficulty
N = 42	How important is the performance of this task in your job as a DACUM Facilitator?	How difficult do most DACUM Facilitators find it is to learn to perform this task effectively?
Task Statements	**Mean**	**Mean**
DUTY A: MARKET DACUM PROCESS		
A-1 Present DACUM concepts	4.26	3.00
A-2 Prepare DACUM promotional materials	3.14	2.70
A-3 Establish procedure for providing DACUM services	3.63	2.97
A-4 Promote DACUM services	3.71	3.05
A-5 Consult with potential DACUM customers	4.12	3.31
A-6 Assess customer need for DACUM	4.26	3.54
DUTY B: PLAN THE DACUM WORKSHOP		
B-1 Conduct job analysis literature search	2.80	2.87
B-2 Develop DACUM services agreement	2.98	2.78
B-3 Orient stakeholders (concerned personnel to the DACUM activity)	3.95	3.13
B-4 Develop committee member profile (list of desired characteristics)	3.86	3.00
B-5 Arrange for workshop facilities	3.76	1.85
B-6 Schedule workshop (e.g., dates, times, location)	3.88	2.15
B-7 Arrange for support services (e.g., media, food)	3.31	1.90
B-8 Analyze observer issues (e.g., concerns, benefits)	3.39	2.73

Task Statements	Importance of Task Mean	Task Learning Difficulty Mean
B-9 Select DACUM workshop team	4.14	3.43
B-10 Prepare workshop agenda	3.50	2.02
B-11 Obtain workshop materials	3.71	1.93
B-12 Prepare room for workshop	3.93	1.59
DUTY C: RECRUIT DACUM WORKSHOP COMMITTEE		
C-1 Develop working definition of occupation	4.02	3.17
C-2 Research sources of committee members	3.21	3.05
C-3 Develop expert worker selection criteria	3.93	3.12
C-4 Establish geographical area to be represented	2.78	2.26
C-5 Develop criteria for industry representation	3.55	2.92
C-6 Identify key contact persons	3.72	3.11
C-7 Assess need for supervisors of expert workers representation	3.44	2.81
C-8 Assess need to involve special interest groups	3.20	2.82
C-9 Explain DACUM to employers and prospective committee members	4.18	3.26
C-10 Invite committee members	3.76	2.15
C-11 Assist committee members to obtain employer approval	3.15	2.50
C-12 Accommodate committee members special needs	3.51	2.56
C-13 Confirm participation of DACUM committee members	3.85	2.03
DUTY D: ORIENT THE DACUM COMMITTEE		
D-1 Greet committee members upon arrival	4.24	1.55
D-2 Collect committee members identifying data	3.10	1.84
D-3 Conduct committee member introductions	4.02	1.74
D-4 Facilitate an ice-breaker activity	3.37	2.42

Task Statements	Importance of Task Mean	Task Learning Difficulty Mean
D-5 Distribute workshop agenda and guidelines	3.74	1.55
D-6 Present rationale for specific DACUM workshop	4.33	2.83
D-7 Present DACUM philosophy	4.26	2.83
D-8 Clarify roles of facilitator, committee members, and curriculum developers	4.40	2.52
D-9 Explain operational guidelines for committee members	4.40	2.50
D-10 Instruct committee members how to compose duty and task statements	4.76	3.93
D-11 Present the DACUM procedural steps	4.43	2.95
D-12 Conduct consensus-seeking exercise	3.44	3.32
D-13 Describe planned follow-up activities	3.85	2.40
DUTY E: MANAGE GROUP PROCESS		
E-1 Orient DACUM recorder	4.05	2.45
E-2 Control group pace	4.31	3.83
E-3 Resolve group conflicts	4.69	4.40
E-4 Maintain group's focus	4.81	4.19
E-5 Enforce rules for observers	4.34	3.10
E-6 Balance committee participation	4.38	3.69
E-7 Reinforce productive behavior/contributions	4.38	3.26
E-8 Deal with disruptive or unproductive committee members	4.64	4.31
E-9 Coordinate hospitality functions	3.19	2.22
E-10 Terminate unproductive session	4.30	3.97

Task Statements	Importance of Task Mean	Task Learning Difficulty Mean
DUTY F: FACILITATE CHART DEVELOPMENT		
F-1 Conduct an occupational review	4.02	3.24
F-2 Conduct brainstorming of the occupation	4.36	3.26
F-3 Elicit duty statements	4.76	4.05
F-4 Obtain consensus on duty statements	4.52	3.83
F-5 Elicit task statements for each duty	4.76	4.10
F-6 Obtain consensus on task statements	4.48	3.93
F-7 Reintroduce unresolved contributions	4.26	3.57
F-8 Elicit list of general knowledge and skills	3.95	2.64
F-9 Elicit list of worker behaviors	3.76	2.66
F-10 Elicit of tools, equipment, supplies, and materials	3.62	2.44
F-11 Elicit of future trends/concerns	3.67	2.71
F-12 Identify list of acronyms and their meanings	3.28	2.23
F-13 Review initial brainstorming lists with the committee	4.02	2.54
F-14 Refine duty and task statements	4.60	3.74
F-15 Sequence task statements	4.12	3.00
F-16 Sequence duty statements	4.17	2.98
F-17 Assess chart using DACUM Quality Standards	4.37	3.39
F-18 Conduct final review of chart	4.33	2.83
F-19 Code task and duty statements	3.95	1.76
F-20 Administer committee evaluation of workshop	3.62	1.64
DUTY G: VERIFY DACUM RESULTS		
G-1 Publish draft of DACUM Research Chart	4.26	2.57
G-2 Develop verification strategy	4.10	3.38
G-3 Develop verification instrument(s)	4.02	3.26
G-4 Select verification respondents	4.00	3.12
G-5 Collect verification data	4.00	3.00

Task Statements	Importance of Task Mean	Task Learning Difficulty Mean
G-6 Analyze verification data	4.17	3.33
G-7 Refine DACUM chart based on verification data	4.34	3.22
G-8 Develop verification report	3.85	3.03
DUTY H: COORDINATE POST-DACUM ACTIVITIES		
H-1 Publish revised DACUM chart	4.44	2.29
H-2 Maintain original DACUM data	3.71	1.73
H-3 Distribute the revised DACUM chart	4.00	1.70
H-4 Acknowledge contributors to the DACUM process	4.49	1.83
H-5 Consult on the application of DACUM results	4.00	3.34

members how to compose duty and task statements (4.76). The lowest importance rating was given to Task C-4, Establish the geographical area to be represented (2.78).

On task learning difficulty, Task E-3, Resolve group conflicts was ranked the highest (4.40) and Task B-12, Prepare room for workshop was ranked the lowest (1.59).

From this study, the writer concludes that there is a significant number of important and difficult to learn tasks required of a DACUM facilitator such that training in the role is essential to success. Secondly, a sufficient data base of identified and verified competencies exists to form a sound basis for planning facilitator training programs and developing supportive training materials.

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Partnership Research in HRD: Pulling Rabbits from Hats

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Most agree that HRD research must be grounded to practice. Yet, unless new approaches to research are considered, this goal will likely remain an abstraction. Partnership research suggests that research problems should emerge from practice and that each partner in the endeavor, researcher and practitioner, should gain something from the study. Most notably, partnership research differs from the more traditional deductive approaches to generating problems. It also differs from action research in that there is a scholarly intent in doing the research.

Partnership research is the approach I use when deriving HRD research from HRD practice. The term partnership research was selected because it emphasizes the close relationship between HRD researchers and HRD practitioners. That is, each person should be meaningfully involved in the endeavor. But partnership research is more than having researchers and practitioners cooperate on a project. In this paper, I suggest that partnership research describes the inductive process used to generate research problems from HRD practice, irrespective of the inquiry paradigm or methodology that is subsequently used to carry out the research. Clearly, partnership research differs from the more commonly used deductive approach to generating research problems. The applied emphasis of HRD makes alternative approaches such as partnership research critical for advancing the field (Leimbach, 1995).

Partnership Research

Partnership research is the process of generating new knowledge through practice. Partnership research has two major attributes. First, as stated, research problems are derived from an analysis of HRD practice. This assumes that in nearly every instance of HRD practice, a research study is waiting to be exposed and conceptualized by an insightful researcher, who is attuned to recognize and appreciate such opportunities. Partnership research requires the HRD researcher to be directly involved in the practice in some way, often as an external consultant to the organization. At some point in the practice, the HRD researcher comes to realize that a broader set of meanings exist in the practice, which can be framed as a problem situation or issue. From that awareness, a more formal problem statement can be constructed.

Second, partnership research requires that both partners anticipate using the results of the research, even though each will use the information for different purposes. Consider that HRD researchers engaged in partnership research seek out practice opportunities to serve organizations and to find new research settings. Thus, HRD researchers primarily view the results as information to be shared with the field. At the same time, HRD practitioners seek out the services of HRD researchers because they are expected to bring with them expertise in specific areas of HRD practice, based on their previous partnership research experiences. HRD practitioners primarily view the results as information to be used exclusively in their organizations, though they recognize that the information may have general importance as well.

As stated, partnership research differs from the more common deductive approach to generating research, in which problems and methods are considered first, then suitable settings are sought out to conduct the studies. While this approach is acceptable and follows an established scientific tradition, unfortunately, practice seldom plays a substantive role at the beginning. Connecting the research and practice is usually considered later in the study. Partnership research also differs from action research. Action research encourages practitioners

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to use a data-gathering process to improve their practices, without concern necessarily for the rigor or generalizability of the results beyond the immediate practice setting (Argyris, Putnam, & Smith, 1985).

To summarize, partnership research uses practice as the platform to generate research. The results are used by practitioners to inform organizations and by researchers to communicate to scholarly audiences beyond the immediate setting. The underlying goal of partnership research is to improve practice and contribute to a scholarly body of knowledge, goals that are viewed here as being complementary rather than contradictory in nature.

Issues in Doing Partnership Research

While partnership research motivates a number of HRD researchers, including myself, it is not always possible to achieve. Numerous issues arise when doing partnership research. For instance, constructing research problems from practice is perhaps the most difficult aspect of partnership research. The researcher must be able to step back and view the situation from a higher level of abstraction, enabling the basic elements of the practice to be considered much more conceptually. Perhaps this skill should be included as part of HRD doctoral programs, since doing partnership research may be considered an essential skill for individuals at this level. Logically, partnership research concepts should also be included as part of HRD master's degree programs, since many advanced practitioners are prepared in this way.

Even if a research problem can be identified, the researcher must decide whether it in fact fits his or her own agenda. HRD researchers can in effect guide their research agendas through the practice opportunities that they agree to take on. Finally, partnership research is not appropriate in all instances or for all researchers. Some studies require more planning and control than what partnership research might afford. Partnership research often requires greater flexibility and ingenuity to fit the research plan to existing situations. And some researchers may feel uncomfortable entering organizations as practitioners first, since either their skills or interests do not follow in this way.

Pay-Offs of Partnership Research

The incentive is that partnership research can yield high pay-offs for both partners. Consider that a study to compare the financial benefits of unstructured and structured OJT originated from the larger need to justify the time and cost demands of using structured OJT. The study served to inform management about the financial benefits of structured OJT, information that helped position the practitioner more strategically in the organization, and it extended the use of a financial forecasting model in a way unique to the literature (Jacobs, Jones, & Neil, 1992).

Other examples of partnership research include a study to compare an employee selection process for large groups versus individuals, which came originally from a company request to validate the selection process (Carr & Hruby, 1995). Freer, Terminello, & Clossman-Wright (1995) reported on the desirability of using context-bound approaches for developing workplace literacy materials, after developing such materials for employees in an automotive supplier company. Finally, a needs assessment by Jacobs and Washington (1992) in a large regional bank resulted in identifying the construct called, planned employee development, which is now the focus of a research project to determine its relationship with organizational outcomes.

Conclusion

Doing partnership research loosely suggests the analogy of a magician performing the trick of pulling a rabbit from a hat. The magician (the HRD researcher) announces that a rabbit is

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actually in the hat (an HRD research problem is actually in the HRD practice), even though the audience is shown the hat and no rabbit is apparent. Then, after saying a few magical words, the magician reaches into the hat and pulls out the wiggling rabbit (a problem statement of value to both partners). Without considering approaches such as partnership research, I suggest that important opportunities to advance the field are being lost, simply because HRD researchers may unnecessarily separate their research and practice activities. HRD researchers engaged in partnership research often find more research rabbits in their practice hats, than what others might believe.

As a community of HRD scholars, our challenge is to generate new knowledge through research. To engage in practice and, at the same time, do research on the practice, which contributes both to organizations and to the HRD literature, should be considered a laudatory scholarly ambition. The coming together of researchers and practitioners to achieve these complementary goals is the essence of partnership research.

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Partnership Research: Challenges and Opportunities

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American Society for Training and Development

Doing research in partnership with others is a dicey but potentially rewarding business. At a minimum, it requires that the (almost always) conflicting needs of the partners be carefully balanced against one another. Given the difficulties involved, there must be a compelling reason for doing research in partnership, rather than in isolation. Developing a clear understanding of these difficulties, along with up-front procedures for addressing them, is essential for successful partnerships.

Partnership, according to Webster, "is a contract entered into by two or more persons in which each agrees to furnish a part of the capital and labor for a business enterprise and by which each shares in some fixed proportion in profits and losses." Even at this level of abstraction, some of the challenges inherent to partnership are readily apparent. What portion of the necessary capital and labor should each partner furnish? And how should that portion be tied to the profits, or in the worst case, losses?

Whatever difficulties exist in answering these basic questions about partnership in a world where outcomes can be anticipated with reasonable certainty, those difficulties are compounded in a world with uncertainty. And anyone who has been at research long enough to get through graduate school has almost certainly learned that the business of research is a highly uncertain one.

These observations, while quite general in nature, can nonetheless go some way toward providing a framework for thinking about partnership research on human resource development issues. Before developing a set of principles for guiding partnership research, it is useful to delineate the perils and opportunities inherent in partnerships.

This is a topic that is of considerable interest to the American Society for Training (ASTD), where I serve as the Vice President for Research. But since I have worked in that position for less than two weeks, the issue of how ASTD's research department will approach partnership research is, to say the very least, not yet well established. Consequently, this represents a fine opportunity for establishing a framework that can be used for establishing promising research partnerships.

Why Bother? Who Needs It?

Good partnerships, like good marriages, don't happen by chance. They require (at a minimum) work, thought, communication, good will, tolerance, and forgiveness. They are unlikely to last for long if the distribution of rights, responsibilities, and rewards is too lopsided. And yet when they work well, partnerships are able to produce more than the sum of their parts. It is this possibility that causes partnerships to come into existence, despite the rather formidable list of attributes required to make good on this possibility.

Researchers, however, are by and large an introverted lot. So by their very nature, many researchers are not inclined to participate in work carried out in partnership with others. Furthermore, the incentive structures that most researchers face tend to dampen enthusiasm for

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partnership research. Most researchers -- especially those in academe -- are rewarded, in large part, based on their individual research productivity.

On the other hand, the complexity of much human resource development research fosters incentives to collaborate. In many research applications, no single discipline, much less a single researcher, can adequately address this complexity. Furthermore, the sheer volume of information (data) required to develop meaningful conclusions promotes partnership. This is not a field (like theoretical physics) where valid insights can be developed by one person sitting in front of a computer screen.

In sum, the reasons (indeed, the necessity) for attempting collaborative research probably more than outweigh the reasons for not doing so.

Partnering With Whom?

The three major candidates for partnership are firms, professional organizations (such as ASTD), and academics. Government could (if it had the resources and the will) play a facilitating role, but virtually no government agency has the people-power to be an active participant in human resource development research.

In most cases that I can imagine, an ideal collaborative research project would include all three types of players. Firms are where the action is. For many types of research, the cooperation of firms is an absolute necessity. They often have valuable data already in hand, and certainly could facilitate the collection of other data that they do not have readily available.

Academics come with inquisitive minds, a tool kit full of useful methodologies and, in most cases, no ax to grind. Together, this gives them credibility, an absolutely essential element in partnership.

Most (although certainly not all) academics are, however, short on a supportive infrastructure, a critical mass of like-minded colleagues, and access to firms. ASTD's research department, while by no means an enormous organization, can provide some support on each of these fronts. But just as is the case for most academics, ASTD's research department is not large enough to mount a major research initiative without partners. It is, however, in a good position to serve as a facilitator, bringing together groups of academics and firms.

What's In It For Each Of The Partners?

Self-sacrifice is a poor foundation for partnership. A necessary condition for successful collaborative efforts is that all partners are made better off by their participation. While this condition need not be satisfied at every moment during the life of a partnership, the players must certainly perceive that it will hold true over the life of the partnership. Certainly, this perception must exist at the beginning of a partnership, or else the partnership will never come into being in the first place. That is to say, each of the partners must get something out of it.

The firms participating in the collaborative effort must have a reasonable expectation that the collaboration will produce information that can be used to improve the firm's performance. Not incidentally, firms must also be convinced that the collaboration will not produce harmful information.

Academic researchers need a reasonable expectation that the collaborative effort will result in high quality, rigorous research that can be translated into scholarly products.

ASTD's condition for participating in collaborative research is that it must produce information that is either of immediate interest to its members, or of long-run value to ASTD's vision of itself as a leader in its field.

Each of the partners needs to be convinced that the results of the collaborative effort will be better than those that could be achieved in isolation. Furthermore, the results need to be produced within a relevant time frame (e.g., well before a tenure decision for junior academics, or while it can still inform decision-making within a firm).

Deal Breakers

Structuring research partnerships as a win-win situation is difficult, but essential. There are several stumbling blocks that will predictably get in the way of partnership. These include: the need for the research to be sufficiently generalizable, the need for the research to be sufficiently specific, and concerns about proprietary information.

From the perspective of academics and ASTD, research is only useful if it is generalizable. This typically requires that many specifics be ignored for the sake of developing insights that have applicability across a wide variety of circumstances.

From the firm's perspective, however, the "devil is in the details." They are clearly interested in understanding the specifics of how and why things do or do not work in the particular circumstances that they face. In other words, generalizable results are much less valuable to firms than they are to the research community.

Balancing the needs of some of the research partners for generalizability against the need of other partners for specificity is obviously a delicate but crucial issue for research partnerships.

Another potential deal breaker in structuring partnership research is access to and the use of proprietary information. This is particularly true when it is firms' outcomes that are being studied. But concerns about proprietary information can become a stumbling block even in cases where it is firms' processes (as opposed to outcomes) that are the subject of research. As firms increasingly walk the talk that "Our people are our most valuable asset," disaggregated, detailed information about human resource practices within the firm (e.g., evaluation of teams and its relationship to reward systems) is likely to be considered proprietary. While a firm might agree to make general information available about these practices (for the purpose of comparing itself to others), the more general is the information, the less likely it is to be valued by the firm. Herein, lies a catch twenty-two. Concerns about access to proprietary information will reduce firms' willingness to provide detailed, specific information to the research partnership. But if the information is provided at a highly generalizable level, its value to firms -- and therefore, their interest in participating -- is diminished.

Deal Makers

Given the many reasons for research partnerships not to exist, there has to be some compelling reason if they are, in fact, to exist. In our line of research, it seems to me that the compelling reason is that the world is simply too complex and evolving too quickly for individuals working in isolation to be able to understand and react intelligently to the circumstances in which they find themselves.

The trick, then, is that research partnerships must produce information that is of sufficient specificity to be of value to firms, but sufficient generalizability both to ameliorate firms' concerns about access to proprietary information and to be of value to researchers. Benchmarking research, with which ASTD has now developed several years of experience, provides at least one mechanism for achieving this balance.

Benchmarking provides a forum that enables firms to compare themselves to other firms, using a variety of measures that are important to firms, but typically not available in a comparable form across firms. To date, ASTD's experience with benchmarking has been limited to measuring training within firms. But the mechanism looks sufficiently promising that it is reasonable to think that it could be applied to other important research issues. Most important among these, perhaps, is the relationship of training (as well as a wide variety of other human resource practices) to firms' performance.

When properly designed, benchmarking has the added advantage of serving as an valuable networking device for those who participate in it. The value that participants derive from networking can help to smooth over some of the inconveniences and annoyances that are an inevitable part of the networking process. In essence, networking becomes an important byproduct of the research partnership. In some cases, it many be the primary benefit that some of the

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partners -- especially firms' representatives -- derive from the partnership. This function, well orchestrated, may enable a nurture research partnerships that would otherwise be untenable.

Principles for Partnership Research

The following principles emerge for structuring research partnerships:

1. There must be a compelling reason for the research to be done in partnership.

2. The research must be structured to balance firms' need for specificity against their own concerns about access to proprietary information and researchers' need for generalizability.

3. Agreements about how resources will be used and who has ownership of research products should be developed before the work is underway.

4. High levels of integrity of all parties involved is essential, particularly when proprietary information is in question.

5. Providing ample opportunities for networking can help smooth over some of the annoyances and inconveniences that are inevitable in partnerships.

University-Industry Partnerships: Meeting the Challenge With a High Tech Partner

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Today's knowledge-based, technological society demands much of both its educational resources and the corporate world, demands that are often met through effective university-industry partnerships. This paper will explore the issues involved in such partnerships and examine a partnership that currently exists between Southern Illinois University and Hewlett-Packard.

Recent years have seen both higher education and the corporate world faced with challenges that demand fresh and creative solutions. As America has moved into the global marketplace, it has undergone a transformation from an industrial to a knowledge-based, technological society which, as documented by the Hudson Institute in *Workforce 2000*, calls for an educated, highly skilled work force. At the same time, universities are faced with the challenge of rising costs and funding problems at both the state and federal levels. It is the combination of these pressures that traditionally has brought higher education and industry into symbiotic alliances that have been mutually beneficial but which also present unique challenges. Cultural differences as well as leadership styles, legal issues, institutional policies, and cycle time concerns are just some of the issues that must be resolved if university-industry partnerships are to succeed. But corporations such as Hewlett-Packard "recognize the important role higher education plays in determining the course of the future by educating today's and tomorrow's workforce, and by developing new knowledge and technologies" (Hewlett-Packard).

In the introduction to their text on managing partnerships between higher education and industry, Matthews and Norgaard (1984) quote from Lewis Thomas' perspective on the nature of partnerships, "The urge to form partnerships, to link up in collaborative arrangements, is perhaps the oldest, strongest, and most fundamental force in nature....We should go warily into the future, looking for ways to be more useful, listening more carefully for the signals, watching our step, and having an eye out for partners." The realization that such partnerships are vital to the life of the university as well as to the future success of industry and the cautionary steps that must be taken when entering into a partnership are lessons that have had repeated exposure as universities and industries have formed alliances in diverse ways to meet a variety of needs. This paper will explore such lessons with a brief historical perspective on the growth of the partnership movement followed by a consideration of the issues that surround university-industry partnerships. It will conclude with a discussion of a partnership that currently exists between Southern Illinois University and the Hewlett-Packard Company.

Historical Perspective

Tracing the progress of the development of university-industry partnerships, it becomes clear that such alliances have had a long and varied history. Bowie (1994) follows their development from the early 1900s through the 1980s beginning with a discussion of the Wisconsin Alumni Research Foundation (WARF), a nonprofit organization founded in 1925 to support the research efforts at the University of Wisconsin. Since WARF was technically separate from the university, it was

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able to accept private funds from business and could award royalties to faculty for patents on products they invented. According to Bowie, WARF is an early example of the problems that can develop from university-industry partnerships as evidenced by how it handled the licensing agreements for a patent created by Professor Henry Steenbock who published research which eventually led to the irradiation of food to activate Vitamin D (and elimination of the childhood disease known as rickets). Because Steenbock was concerned that granting an irradiation license to the oleomargarine industry would hurt the dairy industry, WARF withheld the license for many years until it was brought to court on antitrust charges by the federal government. In another example of the early relationships between higher education and industry, Bowie described the partnerships that have existed at the Massachusetts Institute of Technology since the early 1900s that began with support from companies such as AT&T and Edison GE. It also stands as an example of the ongoing struggle between supporting basic and applied research which led to the creation of two semiautonomous laboratories supported by research contracts with industrial companies and trade associations. In spite of some early challenges, corporations continued to be major sponsors for industrial research in university laboratories throughout the 1930s and 1940s.

In addressing the national policy formation process in higher education, Slaughter (1990) describes how industry sponsorship has waxed and waned in relationship to the federal government's role in higher education. Following the heavy influence of the 1930s and 1940s, private industry's support for research diminished after World War II to be replaced by increasing support from the federal government through the 1950s and 1960s. Another shift took place in the 1970s when a number of large contracts were signed between research universities and industry at a time when the nation was in the throes of a recession and federal monies were being cut for research programs. The trend for industry support continued through the 1980s at the same time that a number of organizations appeared on the scene in response to concerns for the nation's ability to compete in the global marketplace. Organizations such as the Business-Higher Education Forum, the Carnegie Forum on Education and Economy, the Government-University-Industry Research Roundtable, and the President's Commission on Industrial Competitiveness are just a few examples of organizations that address policies related to industry-university-government relations.

In their observations of the transition in this society from a capital intensive, physical-resource based economy to a knowledge-intensive, human-resource based economy, Matthews and Norgaard (1984) suggested this transition called for a new strategy. Knowledge and information were to become the strategic and meliorating resources of society and would demand much of the strength of basic research and technological resources. In this scenario, education assumes a critical role in the economy's infrastructure, and cultivating the relationship between higher education and industry becomes essential. A solid example of such a role is apparent in the creation of Pascal by the University of California - San Diego. Pascal was the first learning tool in structured programming, and it became a standard for the new generation of software. Stankiewicz (1986) goes further to suggest that if these alliances between universities and industry are to be successful, then universities themselves must undergo a cultural and organizational change that will move them in a position to play a decisive role. With this in mind, it would do well to consider in general terms how the existing university culture and organization impact industry partnerships.

Cultural and Organizational Challenges of University-Industry Partnerships

While the exigency of university-industry partnerships is well grounded in the technological demands of a global marketplace, the challenge of managing such alliances must be understood in view of the benefits as well the risks they entail. Fundamental to this discussion is understanding the role that the university should assume in partnership with industry, particularly when research is the focus of the alliance.The Government-University-Industry Research Roundtable (1991) published a summary of interviews with senior industrial research managers from seventeen major corporations. Most industry officials interviewed expressed the belief that university scientists do

not share the same perspective regarding technical advance as their counterparts in industry who perceive it as occurring "most often through small incremental improvements to existing products and processes rather than as large technical breakthroughs" (p. 1). According to the interviewees, "universities play a small role...because university scientists often tend not to operate on or understand industry's short-term schedules or the tools involved in developing an incremental improvement" (p. 1). Peter Boer of W. R. Grace and Company commented that industrial scientists "are better than academics at seeing the broader scope and the long-range outcome" and supports the opinion of other interviewees that industry's culture "fosters entrepreneurial awareness of profitable emerging fields and ideas" (p. 2).

It is cultural differences such as these which are fundamental to the nature of university-industry partnerships. While it might at first appear that these differences would serve to limit the university's role in research, an enormous amount of ongoing research is being conducted at universities in partnership with industries that continue to rely on the knowledge base that supports incremental technological advances as well as breakthrough discoveries. Universities continue to provide a depth of knowledge and techniques that industries can exploit in order to solve problems or produce effective designs.

Matthews and Norgaard (1984) have given considerable attention to the symbiotic relationship that exists in university-industry partnerships while, at the same time, paying heed to some of the risks that may be involved. The following table summarizes some of the possible benefits and risks they and others have identified for both the university and the industry.

Table 1. Benefits and Risks of University-Industry Partnerships

University	Industry
Benefits	
• Additional funding sources for faculty salaries, research and programs • Access to technical and physical resources • Diffusion of technology from a central source of expertise • New resources attractive to prospective faculty • Enhanced institutional curriculum • Student/faculty exposure to real problems that test theories • Carryover strengthens university core programs	• Access to a skilled and adequately trained work force • Access to new windows on research • Ability to influence research directions and educational programs • Substantial tax advantage • Enhanced company image
Risks	
• Undue influence by industry on direction of future programs and research • Conflicts of duty and commitment • Inhibited intellectual freedom and right to publish • Research takes precedence over teaching responsibilities	• Diminished control over proprietary information • Lack of relevant research produced • Measurable return on investment • Consumption of infrastructure resources

Additionally, both environments in such a relationship experience the trans-benefit of a diversity of thinking and paradigm challenges.

A number of scholars have addressed the problems of research partnerships and are

confident that the benefits outweigh the risks, many of which can be avoided if there is a clear understanding of the roles that must be assumed in a university-industry partnership and if ample consideration is given to the cultural differences between the partners. Fairweather (1991) has identified six principal factors which he believes crucial to the success of research partnerships: understanding cultural differences; leadership; organizational structure; legal issues, institutional policies, and contractual mechanisms; capacity and resources; and faculty workload. Cultural differences and legal issues, institutional policies, and contractual mechanisms warrant further examination at this time.

In addition to differing perspectives on the nature of technical advance as previously mentioned, cultural differences between higher education and industry are manifested in both their mission and methods of operation. In most cases the mission of the university is to balance the goals of education and training with research and service, while the dominant goal of industry is to make a profit. Corporations may form an alliance with higher education in order to gain a competitive edge in the marketplace, but universities are more likely to be concerned with research and the publication of results.

Methods of operation may differ as well, though this is not so clearly defined. Some academic institutions struggle with bureaucratic red tape, while others are at least partly decentralized and allow faculty to control curriculum content and influence tenure and promotion decisions. Most corporations traditionally operate under hierarchal, top-down decision making structures, but some such as Hewlett-Packard work from a decentralized team approach. When interviewed by the Government-University-Industry Research Roundtable (1991), Joel Birnbaum of Hewlett-Packard spoke of his concern for the competitive culture of the university which trains its students to compete for grades and top honors when what is needed in his company are individuals who have learned to be part of a team approach.

Additionally, in regards to operation, universities and industry differ markedly in their perception of time. Higher education generally operates under long-term strategic plans, and individual departments within a university often consider research activities on a long-term basis. Industry, however, operating under the profit motive, cannot afford a delay between research and its application to the marketplace. This disparate work ethic offers a challenge to research partnerships since the collegiality of the university environment relies heavily on a long term sense of precedence, committee structure, debate and discussion. Industry, on the other hand, is market-driven, facing the pressures of the life and death struggles demanded of it by the marketplace.

Fairweather (1991) suggests that such differences in methods of operation and mission could be resolved if both industry and universities would seek alliances with partners that operated under similar management styles and if academic leaders sought to create "innovative organizational structures to preserve the integrity of the parent organization while permitting the use of management techniques more relevant to the success of the research partnership" (p. 9). A number of industrial officials interviewed by the Government-University-Industry Research Roundtable (1991) suggested that a key ingredient to overcoming such obstacles was to use the "bottom-up approach" to partnerships where the initial contact is made between a scientist or researcher from each sector as opposed to the "top-down approach" when it is made by senior administrators.

No matter how the initial contact is made, before any work can proceed, legal issues, institutional policies, and contractual mechanisms must be resolved. As indicated in the risk factors found in Table 1, partnerships may raise the issues of intellectual freedom and the right to publish what may constitute proprietary information. In addition, issues with regards to rights to patents, royalties and licensing fees may need to be resolved if the partnership is to succeed. Most institutions have prepared contractual agreements which translate university policy into guidelines for faculty and administrator participation in partnership arrangements. It then is left to the legal departments of the university and industry involved to see that these issues are resolved to the satisfaction of both organizations.

Southern Illinois University - Hewlett-Packard Partnership

In spite of the challenges facing university-industry partnerships, many types of cooperative arrangements are currently in place serving a variety of needs. One such partnership was formed in August 1995 between Southern Illinois University at Carbondale (SIUC) and the Hewlett-Packard Company (HP). Before describing that alliance it would do well to provide some background on the participating organizations. Located in the southern tip of Illinois, SIUC is a comprehensive doctoral institution with an average total enrollment of approximately 24,000, including more than 4,400 graduate/professional students. Ranked by the Carnegie Foundation as a Research II institution, annual support from public and private agencies for research, training, and service projects exceeds $40 million. Competitive research grants account for more than $20 million of the total. SIUC has taken a leading role in a number of research areas important to the economy of Illinois and the nation, including coal research and clean coal technology, materials science, acquaculture, groundwater quality, and neuroengineering. SIUC supports various types of university/industry research agreements including grants, grants-in-aid, contracts, fixed-price contracts, cost-reimbursement awards and cooperative agreements.

Recently named by *Forbes* magazine as the outstanding corporate performer of 1995, HP is an international corporation with revenues totaling $31.5 billion in 1995, The company which began operations in a garage shop in Palo Alto, California, in 1938, has become the biggest maker of computer printers and ranks number six in the highly competitive personal computer market (Wechsler and Upbin, 1996). HP's top-down structure and team approach have helped to create largely autonomous divisions within the company that retain responsibility for strategic decision making. The company has invested heavily in research and development, having spent $2.4 billion in 1995.

The initial contact for the alliance between SIUC and HP followed the "bottom-up approach." Having identified a need for a breakthrough in the testing principle of certification of HP employees, Daniel Blair, Manager of HP Technologies and Systems, initiated a search for someone who was an expert in the field of testing. Blair contacted Bill Coscarelli and Sharon Shrock at SIU, having recalled reading the work of this pair who together through publishing have established a reputation in higher education and business for leadership in the field of testing. Agreement was quickly reached between the principal players as to the nature of the partnership, and a contract was drawn up. Once HP gave their approval, the contract was submitted to SIUC's Office of Research Development and Administration and after about ten days, final signatures were in place for a contract that would run from August 1995 through June 1996.

While not considered a strictly research partnership, the alliance between HP and SIUC demonstrates the advantages that can accrue for both partners and provides examples of the cultural and organizational challenges that must be resolved if a partnership is to succeed. From HP's perspective, by contracting with SIUC, they have satisfied an existing need that had to be met either by hiring new staff who were trained in testing procedures or by going outside the ranks of the HP staff to contract with testing consultants. The latter option was the more cost effective, and they were able to purchase the services of experts skilled in the knowledge they were seeking.

SIUC has profited in turn from the partnership with HP in a number of significant ways. First and foremost is the opportunity this presented to work with a high tech corporation, particularly for the graduate students who are receiving valuable on-the-job training with a company that holds a prominent place in the corporate world. The partnership brought additional funding sources to the university for faculty and graduate salaries as well state-of-the-art equipment. While SIUC has an established reputation for research roles, the partnership with HP is a significant addition to the university's record of achievement.

While both organizations have clearly benefited from the partnership, they have done so by facing the challenges that surface when the culture and organization of the university and industry come face to face. And in this instance, the importance of culture was expressed through the language of the corporate world. The first conference calls between Coscarelli and the staff at HP caused some initial hesitation as he found himself having to adapt to the language that was more in line with the corporate experience. For example, when doing a needs assessment,

members of the HP staff responded stiffly to questions about "their knowledge of testing" but loosened up immediately when the language switched to asking "their opinion." Given HP's international scope, language continues to be a factor in the designing of printed materials as these must be sensitive to English-as-a-second language issues.

The issue of time quickly emerged in this partnership. Three months is almost forever in the high tech world, but the university bureaucracy is incredibly slow. While the contractual agreement itself was arranged expeditiously, legal issues and internal billing issues continue to surface and while they have not impeded the progress of meeting HP deadlines, they have certainly added to the workload of the staff as they seek to resolve the problems. For example, for over three months an attempt has been made to obtain a corporate account with a major internet provider, but the legal wranglings of the university bureaucracy combined with the difficulty of pinning down a single contact person for the internet provider who could help resolve the problem has left the account application as yet unresolved.

In other matters relative to time, the university calendar with its semester and holiday breaks is challenging to an industry that may close only for major holidays. So to is the concept of part-time office hours which are quite customary in the university setting but almost unheard of in the corporate world. Coupled with the constraints of working within different time zones, the time issues underscored the reliance on voice-mail and e-mail as a major form of communication.

Another factor which presented an immediate challenge to operating within the partnership from the SIUC perspective is the diversified nature of HP. The company is dispersed throughout the world and available, for the most part, only electronically. "Corporate entropy" is the most apt description for the challenge this presented. One literally owns the problem and continues to push until it has been resolved. Working within such an environment, there are also many more opportunities and pressures to derail issues that do not fall under what Blair refers to as the "tyranny of the urgent." Using the metaphor of the backpressure of an engine, a problem's resolution may never get rolling since within a business there is no such thing as momentum in the long term.

The electronic nature of this working arrangement raised concerns for HP as well in regards to securing the transfer of data between the respective agencies. Secure communications networks had to be established and precautions taken on SIUC's part in an environment that generally tends to be quite open.

As mentioned previously when looking at the risk factors involved in university-industry partnerships, the issue of proprietary commitments becomes significant in that it prevents the publication of work related to the grant project. Such is the case with this partnership and though the experience of working through the problems presented by this company or any company in such an alliance challenges one's resources to solve them and expands one's expertise in so doing, the opportunity to publish work directly related to the project is denied. At the same time, the industry involved must safeguard its product line, and in this case HP found it necessary to hold SIUC to a proprietary commitment.

Conclusion

Having met and continuing to manage the challenges of working in partnership, representatives of both SIUC and HP would agree that the advantages far outweigh the disadvantages or risks such an alliance involves. Historically, such partnerships have flourished in spite of the challenges brought on by the cultural and organizational differences between industry and universities. They have flourished because both parties have found the alliance to be mutually beneficial. Corporate and university politics may be horrendous and both environments may function with different realities and different dimensions of time, but if you are going to have high tech, you are going to have high touch. The SIUC-HP partnership is but one more example of how such a partnership succeeds by meeting the challenges head on and adapting the approach of higher education to meet the demands posed by the cultural and organizational structure of industry.

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PLS Evaluation System: Sales Communication Case Study

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This case study is an application of the three-domain performance-learning-satisfaction (PLS) evaluation model to a performance improvement intervention focused on sales communication training. The case study inquiry questions revolved around workability of the PLS, in-process evaluation activities and decisions, and the actual evaluation result. Among the results, the Sales Communication training yielded a net financial performance gain of $2,352,300 and a 8:1 financial return on investment in less than a year.

The gap between sound evaluation theory and typical practice is a serious problem for human resource development-performance improvement (HRD-PI) in industry, business, and government organizations (Swanson, 1990). HRD-PI includes personnel training and development, organization development, and more general performance improvement efforts. Evaluation is one of the primary phases of the systematic HRD-PI process. The first four phases of the process include analysis, design, development and implementation (or some variation of these elements).

A literature review of the summative evaluation noted that evaluation, when conducted, is not conducted effectively (Parker, 1986). A typical work-place scenario consists of the busy HRD-PI practitioner doing what the company wants, feeling successful, and not being regularly required to prove the added value that results from HRD-PI contributions. With a full agenda of important development and delivery tasks, the busy professional finds it difficult to evaluate. However, almost all important organizational processes and functions are regularly evaluated in terms of their effectiveness, efficiency, and bottom-line contributions to the enterprise. In addition, it has been clearly established that effectiveness evaluation data, particularly bottom-line performance results, are the key to gaining support for the HRD-PI function from top management (Kusy, 1988). It is clearly irrational *not* to evaluate HRD-PI programs and processes.

Both Parker's review of literature and Kusy's study of management support of effectiveness evaluation established the need for this study. The long-standing and popular four-level evaluation model that dominates the profession has been judged by most thoughtful minds be invalid and invalid, causing problems rather than solving problems for the profession (Alliger & Janak, 1989; Holton, 1996; Newstrom, 1995). Sadly, the most vocal defenders of inadequate theory and practice demonstrate little understanding of sound evaluation practice or theory while advocating for simplicity (Kirkpatrick, 1995 & 1996). It is important to note that and evaluation can be both simple and valid, and that a simple and invalid evaluation effort is worse than no formal evaluation

Purpose of the Study

The purpose of this manuscript is to report one of a series of case studies applying the Performance-Learning-Satisfaction Evaluation System (PLS Evaluation System) (Swanson, 1995). The inquiry questions include: (1) Can the PLS Evaluation System be applied to the sales communication case? (2) What in-process activities and/or decisions in the application of the PLS Evaluation System to the sales communication case provide additional understanding? (2) What are the PLS Evaluation System data resulting from the sales communication case study?

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PLS System Overview

The *PLS Evaluation System* addresses the evaluation phase HRD-PI and consists of five major elements: (1) PLS Evaluation *Model*, (2) PLS Evaluation *Plan*, (3) PLS Evaluation *Tools*, (4) PLS Evaluation *Schedule*, and (5) PLS Evaluation *Report*.

The PLS Evaluation System is grounded in systems, psychological, and economic theories. The evaluation system logically connects the performance goals specified in the up-front performance analysis with the performance outcomes. Also acknowledged are the related or mediating outcomes of learning and satisfaction (Swanson, 1995).

The System contends that without a connection to up-front analysis, it is unlikely that performance results at the individual, process, or organizational levels will be found. The fundamental flaw of providing an intervention and then looking for results (or transfer) has been at the crux of HRD-PI poor practice (Swanson, 1994). Even so, the results of placing a rigorous evaluation process on top of a poorly conceived HRD-PI intervention can minimally cause an organization to reassess its practices.

The *PLS Evaluation System* purports to be a rigorous, yet flexible, evaluation system. It is flexible enough to accommodate almost all situations. It is rigorous enough to consistently honor core questions, techniques, and reporting results as part of every evaluation. In addition to the *PLS Evaluation System* conceptual components, job aids, tools, and references, there is an auxiliary data processing system consisting of a computer, software, a data input scanner, and a printer. This system allows for the production of program specific scannable data entry sheets, scanning of completed sheets into the computer memory, and the manipulation of the data into a standard format report.

PLS Evaluation Model

The evaluation model embraces the domains of performance, learning, and satisfaction (PLS). Each of the three domains are divided into two options for a total of six evaluation options labeled A-F.

The three domains of performance, learning, and satisfaction are not levels or a hierarchy (see Holton, 1996; Newstrom, 1995). They are domains of independent worth from an evaluation perspective. While there can be a relationship between the domains, it cannot and should not be assumed that there is a direct positive relationship. Contrary to the practitioners myth, the research shows that participants most satisfied with a program are not necessarily those who learned the most (Alliger & Janak, 1989; Dixon, 1990). High or low satisfaction can be found among low, medium, and high achievers. And, because participants have gained knowledge and expertise does not mean that they will use it in the workplace (Gielen, 1995).

Performance can be thought of as (a) business results at the organizational, process or individual levels and/or (b) financial results or benefits in terms of money or monetary ratios. Most, but not all, business results can be monatized and turned into financial results. For example, the business result of increasing market share by 5% could be converted into numbers of sales times the financial value of each sale. Another example would be to increase the hourly production rate of injection molded items (that meet quality standard) from 30 to 35. In each of these examples the business results can be monitized and then expressed in terms of financial results.

The general financial results goal of the *PLS Evaluation System* is that the benefits exceed the costs by a 2:1 ratio. If the 2:1 return on investment goal is achieved, it can be said that the program achieved 100% of its goal. A 2:1 return on investment, especially in a year or less, is ambitious. Organizations may want to choose and adhere to a lesser goal. In all instances the actual data can be reported as well as the goal attainment data.

Learning can be thought of as (c) knowledge demonstrated through completion of tests of information and concepts and/or (d) expertise in demonstrating the skillful workplace behaviors in a simulated or actual work situation. Knowledge is most efficiently measured through objective tests presented through paper and pencil or technology. This is because objective tests allow for a larger sample of learning from each participant in a minimum amount of time.

While knowledge is a component of expertise, demonstration and assessment of skillful workplace behaviors pushes the training closer to reality. As with the performance and satisfaction

domains, rational goals need to be established for the learning areas of knowledge and expertise. The 100% goals for knowledge and/or expertise must be connected to the behavioral outcomes established for the intervention. These outcomes generally focus on (1) not meeting, (2) meeting, or (3) exceeding standards. The general learning results goal of the *PLS Evaluation System* is that participants, on the average, meet learning and expertise standards. Thus, if meeting standard is 2 on a 1-3 scale, an average score of 2 would be attainment of 100% of the goal.

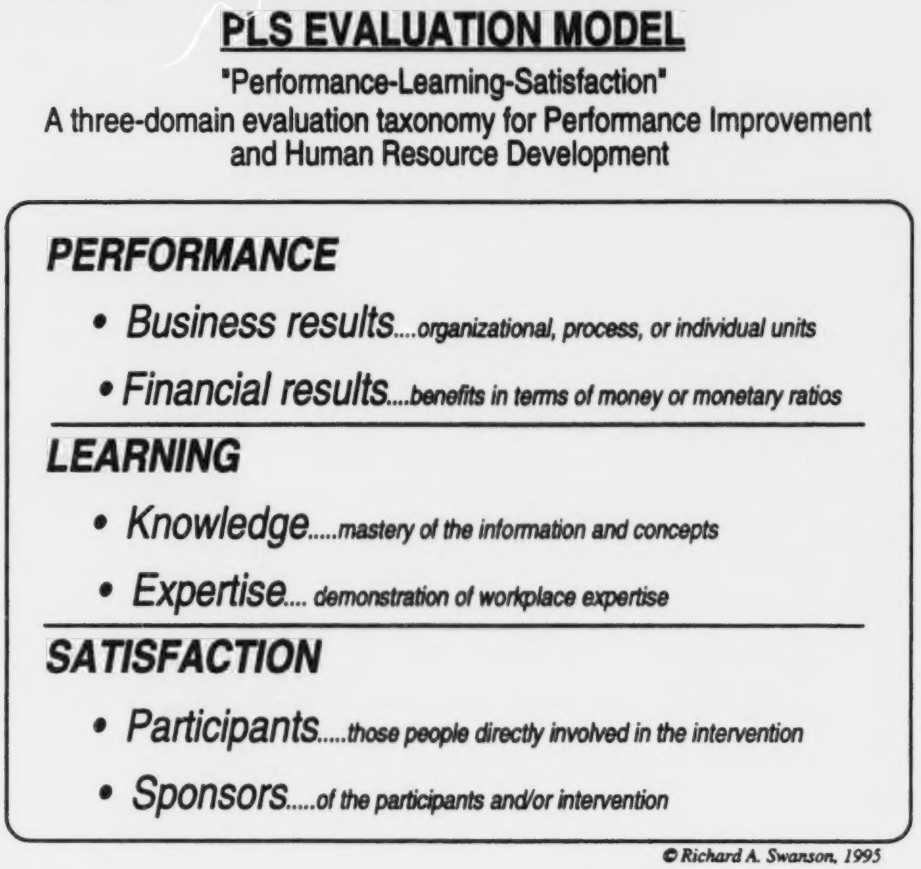
PLS EVALUATION MODEL
"Performance-Learning-Satisfaction"
A three-domain evaluation taxonomy for Performance Improvement and Human Resource Development
PERFORMANCE
• Business results....organizational, process, or individual units
• Financial results....benefits in terms of money or monetary ratios
LEARNING
• Knowledge.....mastery of the information and concepts
• Expertise.... demonstration of workplace expertise
SATISFACTION
• Participants.....those people directly involved in the intervention
• Sponsors.....of the participants and/or intervention
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Figure 1. PLS Evaluation Model

Satisfaction can be thought of as the (e) perceptions of the interventions by the participants directly involved and/or (f) perceptions of the sponsor (or supervisor) as to the participants and/or interventions. The overriding concern is that perceptions be acceptable, not negative and not jubilant. Since most development and improvement efforts require change, and change is not comfortable, it is illogical to pursue extremely high ratings. And, extremely low ratings end up being culturally counter productive. The standard 4 Likert scale (2 levels each of negative and positive with an acceptable mid-point score of 2.5) establish 2.5 average as the "acceptable" satisfaction goal. Thus, if the satisfaction rating average is 2.5, it can be said that the program achieved 100% of its goal. Only after there is clear evidence that performance and learning goals are being reached should there be focused concern for raising the 2.5 satisfaction goal.

Case Study Context

The application of the *PLS Evaluation System* in this case study involved a communication training program for sales personnel in a major insurance company. The salesforce sells insurance

plans to employers. The performance improvement intervention in this case included training that was provided to 167 sales personnel through 24 program offerings at various sites throughout the nation over a six month period.

The company had an ongoing commitment to generic communication training for their sales force. Given this base of support, the manager conducted a performance diagnosis that confirmed the loss of business as a result of inadequate communication skills and a more precise profile of the specific communication expertise required. Supervisors of the sales personnel were also trained in coaching the communication skills, were recruited to assist in the role-playing assessments of expertise during training, and in conducting follow-up evaluations and coaching back on the job.

The company has a system for tracking sales by salesperson, office, region, and product. They also have standard gross and net financial measures per sale. The connection between available financial measures and the specific of this case were not known at the onset. They became clear through the application of the *PLS Evaluation System*.

The inquiry questions directly the case study were: (1) Can the PLS Evaluation System be applied to the sales communication case? (2) What in-process activities and/or decisions in the application of the PLS Evaluation System to the sales communication case provide additional understanding? (2) What are the PLS Evaluation System data resulting from the sales communication case study?

Case Study Evaluation Plan Results

In the *PLS Evaluation System*, planning decisions are recorded on the *PLS Evaluation Plan*. Figure 2 is a sample completed *PLS Evaluation Plan* for "Communication Training".

PLS Evaluation Plan

"Performance-Learning-Satisfaction"

Program Title: COMMUNICATION TRAINING

Plan Approvals: _____ Date _____

Domains (3 domains, 2 options for each)	Choices (Within domains) Yes?	Choices, if yes?	Points on the Data Collection Timeline (Data Pertaining to the Program or Intervention) Before 1 2 3	During 4 5 6	After 7 8 9	Other Comparison Options 10- Cycle #2 ___N 11- Standard 12- Norm 10 11 12	Data Analysis Plan (Data to be compared to answer the evaluation question for a specific "Domain" row A-F)
Performance	X						
A. Business Results		X			X		A8 (Exp Rated Sales
B. Financial Results		X			X		B8 ($98,012/Sale
Learning	X						
C. Knowledge							
D. Expertise		X	✓	X X	X		D3 ↔ D7
Satisfaction	X						
E. Participants		X		X		X	E6 ↔ E11
F. Sponsors		X			X	X	F8 ↔ F11

↔ = compared to

EVALUATION PLAN NOTES:

A. Business Results: EXP. RATED SALES ATTRIBUTED TO TRAINING

B. Financial Results: ATTRIBUTED SALES × $ NET AVERAGE/SALE — $ FIGURE FROM COMPTROLLER

C. Knowledge: NONE (TESTING EXPERTISE IS BEST ALTERNATIVE)

D. Expertise: 12 DIMENSION/3 POINT SCALE EVAL FORM — D4 & D6 FOR INSTRUCTION

E. Participants: USE STANDARD INSTRUMENT (E6) — GOAL 2.5 OR HIGHER

F. Sponsors: USE STANDARD INSTRUMENT (60 DAYS FOLLOWING)

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Figure 2. PLS Evaluation Plan for the Sales Communication Intervention

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The "Domains & Options" rows of the plan follow the three evaluation domains and the six evaluation options presented in the *PLS Evaluation Model* (Figure 1). The vertical columns require the planner to make a series of decisions in relation to the evaluation domains and options. Once the evaluation option choices are made, data pertaining to the program or intervention is collected within a timeline. This timeline can generally be thought of as being before, during, or after the intervention.

All three domains were checked for the Communication Training case. Of the six A-F options, only "C. Knowledge Test" was not checked. This was not checked because of the very tight connection of the content of the training program to the test of expertise, option D, and because of the practical concern for the amount of in-program time that could be dedicated to testing.

For "A. Business Results," the decision was to measure sales that were attributed to individuals and to do this 60 days following the training. This was the most complex decision in the plan. In this case setting sales personnel make a small number of sales that are individually worth a great deal. Time needed to lapse in order to determine the effect, if any, the communication training had on sales. Unlike other case studies, there was not a reasonable comparison group given the changing market, limited sales, and across-the-board training that took place. Thus, it was determined that sales people and their supervisors would be asked to report on any sales, or portion of sales, attributable to the training. The position taken was these estimates would be underestimates and that the specific sale had to be recorded if there were any questions about the data base. Thus, these were not perceptions of performance. Rather, they were specific actual sales.

For "B. Financial Results" the total number of sales was multiplied by the net worth of an average sale, $120,000. A meeting with the comptroller yielded this figure following a zigzag conversation about available financial data. The direct cost of the training is compared to the net profit from the reported sales attributable to Communication Training to determine the ROI.

For "D. Expertise" an instrument was created to assess expertise. This simple rating instrument was used before, during, and after the Communication Training and was instrumental in connecting the training and line management elements of this performance improvement intervention. Trained observers rated participants in a role playing situation used a 10 category instrument with each category assessed as exceeds standards (3 points, meets standards (2 points), and below standards (1 point). The goal was to obtain an average score of 2.0 at the end of training, D6 on the timeline. In this case the average score was 1.89 or 98% of the goal. Also reported were the before (D3) and after (D7) scores which were 78% and 103% of goal.

For "E. Participant Satisfaction" a standardized PLS rating form was completed by each participant at the completion of training. These were averaged and compared to the standard of 2.5 or higher on a 1-4 scale.

For "F. Sponsor Satisfaction" a standardized PLS rating form was completed by each supervisor of participants sixty days following the completion of training (F8). These were averaged and compared to the standard of 2.5 or higher on a 1-4 scale (F11).

Case Study Evaluation Tools

Evaluation tools can be constructed and used for each of the six evaluation options (A-F).
Of these, performance scores are indicators of the business effects that result from an HRD program. Learning scores are indicators of the amount of knowledge and expertise acquired by the participants during the development program, and the satisfaction scores are indicators of how participants and their sponsors perceive the program. Although there are many possible ways to configure evaluation tools, *the PLS Evaluation System* focuses on six reasonable options (A-F) and recognizes that not all six are always used.

Performance. In the *PLS Evaluation System*, the tools for measuring the performance results back in the organization are business results and financial results. Business results contrast the productivity of either the organization, business process, or individual employees (1) before and after the HRD-PI program or (2) against a comparison group, standard, or norm. It is always desirable to utilize the organization's existing direct measures of performance such as sales, items produced, customer's served. In that organizations are dynamic, judgments may be required in terms of attributing the portion of performance attributable to the intervention being evaluated. In

this case, and in every case I have participated in, estimates of the HRD-PI contribution by line managers have been underestimates. As might be expected, line personnel tend to want to take as much credit as they can. Even so, this state of affairs still leaves high quality HRD-PI interventions in the realm of excellent business investments.

Financial results are used to determine the economic value of the HRD program, the benefit of which is determined by subtracting the cost of the program from the performance value resulting from the program. The financial cost accounting methods and norms utilized by the organization should be consistently applied to all calculations. Thus, if employee salary during the time they are participating in a development program is not normally costed back to the intervention, it is not considered as part of the cost basis. In many calculations this salary cost variable will already show itself in lost productivity from being absent from the workplace.

On the performance value side, it is generally easier than you think to determine the value of a unit of performance. This critical financial information is almost always a few tiers away from the place where the actual performance takes place. Financial benefits are a matter of subtracting costs from the resulting performance values. Interpretation of this data has been discussed in earlier sections of this article.

Learning. Learning is measured by knowledge tests, tests of expertise, or both. Knowledge tests measure the cognitive information learned by participants. Two types knowledge test items, multiple choice and matching, are encouraged because they can be scored objectively and are not as susceptible to guessing as are other forms of test items and not as subjective and time consuming as verbal testing or written essays. In constructing knowledge tests, as with all tests, care must be taken to ensure that the test produces valid and reliable results. A test is valid when it measures what it is supposed to measure and it is reliable when it produces consistent results.

Tests of expertise measure what the learners can do by examining either the products that the learners produce or the processes exhibited by the participants as a result of their learning. An in-program test of expertise must also be valid and reliable.

Satisfaction. The *PLS Evaluation System* requires that "satisfaction" be measured for every intervention. Participant satisfaction is measured by having each participant complete the Program Evaluation Form at the completion of the program. This is a standardized form that should not be altered in terms of the front page questions. The participant satisfaction score is calculated by tallying all the participant responses to the front page questions. Ordinal values are then assigned to descriptors as follows: very good (4), good (3), fair (2) and poor (1). The overall participant satisfaction score is obtained by averaging the scores and determining the mean satisfaction score which will fall within the 1-4 range. Sub-scores on the individual questions can also be computed this way.

Comments written by the participants on the participant satisfaction form are not included in the participant satisfaction score. They provide open-ended feedback for the facilitators, presenters, and program planners for program improvement and are used to highlight the report.

Sponsor satisfaction is measured by using the Sponsor Evaluation Form (Figure 8), which is completed by each participant's supervisor or sponsor. After the responses are gathered, the average sponsor satisfaction score for the HRD-PI program is computed in the same manner that the average participant satisfaction score and sub-scores are determined. As before, the written comments provide the facilitator, presenter, or program planner with immediate, open-ended feedback.

Using standard participant and sponsor satisfaction forms for all training courses allows for the comparisons of HRD-PI programs with each other and across time. This makes it easy to identify and document recurring problems and/or successes. The use of scannable participant data sheets makes the data analysis quite easy.

Case Study Evaluation Report

The *PLS Evaluation Report* is an "Executive Summary" of the effectiveness of a program (or set of identical interventions). The intention is that every program offering be evaluated in terms of its' effectiveness and that the results be reported to the appropriate stakeholders in the organization. *PLS Evaluation Reports* have a standard format, standard sections, and standard means of reporting data. And, reports are short, generally 2-4 pages in length.

There are eight standard sections: (1) Organization and Program Identification Heading, (2) Program Purpose, (3) Program Description, (4) Evaluation Summary, (5) Approval, (6) Distribution List, (7) Evaluation Results (Performance, Learning, Satisfaction, and (8) Improvement Proposal.

In that the *PLS Evaluation Report* is an executive summary, there is available evaluation data exceeding what is contained in the report. This additional data is retained and used by the department for tracking and improving specific elements of the program and for responding to specific evaluation inquiries. In summary, the evaluation results for Communication Training were as follows:

A. Performance, Business Results: In total, 24 sales by the participants in the 24 training sessions were verified as having been the direct result of the communication training in the nine months following the training. No comparison to goals or norms was made in that the annualized data is still unavailable.

B. Performance, Financial Results: The net profit from the reported sales attributable to Communication Training was $2,352,3000. The cost of the 24 training sessions was $288,000. The conservative estimate of the financial return-on-investment in the six months was 8:1 ROI. The standard PLS Evaluation System financial goal is 2:1. Thus, the Communication Training attained 409% of goal for the nine month period.

C. Learning, Knowledge: No knowledge tests were administered as it was determined that the tests of expertise directly verified the required knowledge and that having one in-training test was adequate.

No comparison made

D. Learning, Expertise: Using a standardized rating form, expert raters evaluated the expertise of the participants on a multi-dimensional instrument. A mean rating of 2.0 was equivalent to "meets clients expectations." Before training the average participant rating was 1.71 (86% of goal), at the end of training it was 2.12 (106% of goal), and 60 days after training it was 2.33 (117% of goal).

E. Satisfaction, Participant: The average participant satisfaction rating by 167 people on a 4 point scale at the end of program on was 3.72 compared to the goal of 2.5. Thus Communication Training attained 149% of the participant satisfaction goal.

F. Satisfaction, Sponsor: The average sponsor satisfaction rating 60 days after the program was 3.68 compared to the goal of 2.5. Thus, Communication Training achieved 147% of sponsor satisfaction goal.

The PLS Evaluation System is designed in a manner that allows the utilization of computer hardware and software to create instruments, scan data into the computer, and to call out the data required for the PLS Evaluation Report. These were all utilized in the case study and still require further development.

Conclusion

The purpose of this manuscript was to present a case study of the application of a purported practical and valid evaluation system that can be applied to any HRD-PI program in business, industry, and government-- for profit or non-profit organizations.

In this case study the PLS Evaluation System was successfully applied to the sales communication training and the data provided convincing evidence of the effectiveness of the sales communication intervention.

While the case study validates the workability of the PPS Evaluation System, several issues emerged and are presented in the form of questions for further research and/or development:

- Should the person doing the up-front performance diagnosis also be responsible for the performance evaluation component of the PLS evaluation?
- Should the primary internal customer of the evaluation report be involved in reviewing the evaluation plan?
- What minimum level of knowledge and expertise should a person have before managing any individual evaluation effort?
- What are the response from various stakeholders to the practice of setting a 100% goal for each evaluation area?
- What is the organization response to PLS evaluations over time?

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Assessing Organization, Team, and Individual Learning: The Strategic Learning Assessment Process

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This paper describes the development and pilot application of an organizational learning assessment process based upon the Strategic Learning Model proposed by Redding and Catalanello (1994). It presents an overview and case illustration of the assessment process. It then describes the first phase of a three-phase pilot study. Findings support the practicality of the approach, while suggesting improvements to increase assessment reliability.

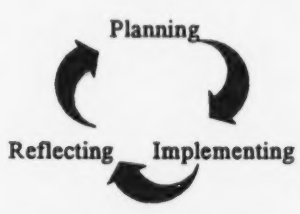
Organizations are being challenged to produce increasingly fast and fundamental changes to how they do business. The success of firms in executing high speed, organization-wide transformation is dependent upon their capacities for organizational learning. As a result, widespread interest exists in the creation of reliable and valid methods to assess organizational learning capabilities. While numerous diagnostic and assessment methods are being proposed, they primarily examine organizational characteristics and systems identified in the literature as associated with firms recognized as "learning organizations" (Gephart, Marsick, Van Buren, Spiro, and Lucadama, 1995). No direct and comprehensive assessment of organizational learning processes is currently known to exist. Such an assessment method should be able to make comparative judgments regarding the speed and effectiveness of organizational learning among different organizations, within the same organization over time, and among subunits of the same organization. This paper proposes such a framework and describes a pilot study of its application.

Strategic Learning Model

The assessment process presented here is based upon the Strategic Learning Model proposed by Redding and Catalanello (1994). Derived from best practice field study of leading change-oriented companies, this model offers an alternative to traditional strategic planning models. It proposes that the dynamic, iterative process through which organizations plan and execute strategic change can best be represented as follows:

1. Organizations formulate and execute strategic change through a series of organizational learning cycles, with each cycle comprised of three phases: planning, implementing, and reflecting. (See Figure 1.)

Figure 1. The Strategic Learning Cycle



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2. Strategic learning cycles occur at three structural levels in the organization:

   Organization/business Unit Level
   Team Level
   Individual Level

3. Each strategic learning cycle can be assessed across three dimensions:

   Speed -- The length of time it takes to complete an iteration of the learning cycle
   Depth -- The degree to which single-loop and double-loop learning occurs during each iteration of the learning cycle. In contrast to single-loop learning, double-loop learning represents a deeper form of learning that is an increasing necessity for organizational survival amid chaotic, turbulent business conditions. According to Argyris (1992, p. 9), "Single-loop learning is appropriate for the routine, repetitive issues -- it helps get the everyday job done. Double-loop learning is more relevant for the complex, non-programmable issues -- it assures that there will be another day in the future of the organization."
   Breadth -- The degree to which learning is transferred to other parts of the larger organizational system or to other strategic challenges facing the firm

According to the strategic learning model, the capacity of an organization to produce fast and fundamental strategic change is based upon the speed, depth, and breadth of strategic learning at the organization/business unit, team, and individual levels.

Strategic Learning Assessment Process

The Strategic Learning Model has the potential to provide a practical framework for assessing organizational learning processes as they contribute to the creation of strategic change. The following outlines the steps an assessment team might take to conduct such an assessment and illustrates how the assessment might be applied in the case of an office equipment manufacturing firm.

Step 1: Identify a Strategic Challenge. The assessment team begins by selecting a major strategic challenge that the organization has identified as critical to its future success. The actions taken to address this challenge will serve as the focus for the assessment at all three levels: the organization/business unit level, the team level, and the individual level. In the case of the equipment manufacturer, an assessment team might select the firm's planned North American consolidation as a strategic challenge to be assessed. During a recent strategic planning session, the company determined that competitive pressures are requiring that it consolidate its U.S. and Canadian operations into a single North American unit, while still meeting the unique needs of both markets.

Step 2: Track Actions Taken to Plan and Execute Change. Next, the assessment team tracks the actions taken in the organization to address the strategic challenge. These actions are followed at three structural levels: the organization/business unit level, the team level, and the individual level. At all three levels, information is specifically gathered to identify and evaluate iterations of the learning cycle as plans are developed, implemented, reflected upon, and new plans created as a result.

Step 3: Identify Learning Cycles. The actions taken at organization/business unit, team, and individual levels are examined to identify iterations of the learning cycle.

Organization/Business Unit Level. In many cases, learning cycles at this level occur over a multiyear period. For example, the equipment manufacturer developed a plan to consolidate its North American operations over a six month period. It then implemented the actions during the subsequent 12 month period. A year later, the organization reflected on the effectiveness of the North American consolidation, and, as a result, made changes to its plans. At this point, the first

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learning cycle iteration was completed. These revised strategies were then implemented over the next year, initiating a second iteration.

Team Level. The planning and implementing of strategic change is often executed by teams acting on behalf of the whole organization. For example, to develop the initial North American consolidation plans, the equipment manufacturer established six teams: a marketing team, a financial team, a distribution team, an operations team, an information systems team, and a human resource team. Each team was charged with developing a plan of action to consolidate U.S. and Canadian operations in its assigned area and coordinating these plans with other teams. The actions taken by each team can be understood as a series of learning cycles. For example, the marketing team met for two days and identified the key issues that needed to be addressed to produce a successful consolidation. It left the meeting with a plan to investigate these issues over the next month. The team met again a month later, in which it shared the information that had been gathered and reflected upon what had been learned. At this point, a first iteration was completed. During the second meeting, the team identified a general strategy to consolidate U.S. and Canadian marketing efforts. Over the next month, these plans were presented to each of the other teams and to management. The team then met again and revised its plans based upon the feedback it received. At this point, a second iteration was completed. The team then developed a specific implementation plan to execute the strategy, thus starting a third iteration.

Individual Level. The actual implementation of strategic change often requires many members of the organization to make basic changes to their daily job responsibilities. The actions taken by individuals to execute the strategic change can similarly be understood as occurring through a series of learning cycles. For example, as part of the plan to consolidate North American marketing efforts, the vice president of marketing, U.S., now became the vice president of marketing, North America. After assuming this broader set of responsibilities, the individual was quickly surprised by the differences between advertising expenditures in the U.S. vs. Canada. In the U.S., advertising dollars were entirely devoted to a series of large national advertising campaigns. In Canada, the organization relied almost entirely upon direct mail marketing. The vice president decided to phase out Canadian direct mail over a six month period. Two months later, the vice president reviewed Canadian bookings and noticed that they had begun to decrease. Several managers felt that the decrease was a result of the phasing out of direct mail marketing. In response, the vice president decided to take a trip to Canada and visit a range of different customers. In response, the vice president decided to reinstate direct mail as the primary advertising method in Canada. The actions taken by the vice president can be understood as a series of learning cycles in which the vice president developed a plan of action, executed the plan, and reflected to determine what had been learned as a result of the actions.

Step 4: Assess the Speed, Breadth, and Depth of Strategic Learning. At all three levels, the assessment team then attempts to reach consensus on the speed, depth, and breadth of strategic learning.

Speed. The assessment team identifies dates for each of the following:

1. Start date and end date of planning phase for cycle #1 (P^1)
2. Start date and end date of implementation phase for cycle #1 (I^1)
3. Start date and end date of reflection phase for cycle #1 (R^1)

The assessment team then calculates the overall cycle time for the first learning cycle, as well as cycle times for each phase of the first cycle. This process is repeated for each learning cycle iteration that is being assessed.

Applying this process to the equipment manufacturer attempting to consolidate all North American operations, if sufficient information is available, the assessment team should be able to calculate the overall learning speed at the organization/business unit level as the firm executed the consolidation. Similarly, the team should also be able to calculate the learning speed at the team level for each of the six teams that developed the consolidation plans. Moreover, it should be able to calculate the learning speed of key individuals charged with implementing the plan, such as the vice-president of marketing.

Depth. For each iteration, the assessment team then compares the original plan of action completed during the first planning phase (P^1) with the plan of action completed during the second planning phase (P^2). The team then rates each iteration as follows:

No learning occurred -- P^1 and P^2 are the same.
Single-loop learning occurred -- P^1 and P^2 are different, and the two plans are based upon the same set of framing assumptions.
Double-loop learning occurred -- P^1 and P^2 are different, and the two plans are based upon a different set of framing assumptions.

For an accurate assessment, the assessment team needs to reach consensus regarding the existence or nonexistence of framing assumptions. Framing assumptions are factors or conditions that need to be present for the plan to make sense. In most cases, these assumptions are not explicitly stated in the plan or by the planners. They can be inferred only by looking at the actions contained in the plan. For example, with the North American consolidation example, if the first plan was based on the assumption that Canadian customers expect the same levels of service as do U.S. customers and the second plan is based on the assumption that Canadian customers have different service expectations than do U.S. customers, one can conclude that double-loop learning occurred as a result of the first iteration.

Breadth. For each iteration, the assessment team then determines whether the learning that resulted from the learning cycle is transferred and used elsewhere in the organization. If so, it should be possible to determine whether plans developed in other parts of the organization have been modified as a result of the learning that has occurred as the organization, teams, and individuals take action to meet this strategic challenge. For example, let us say that one of the North American consolidation teams, the marketing team, discovers that customer expectations in Canada are significantly different than customer expectations in the U.S. If this learning is transferred to the other five teams, and the other five teams modify their plans as a result, one can conclude that a successful transfer of learning has occurred.

Pilot Study

A pilot study of the Strategic Learning Assessment Process is being conducted to answer several questions:

1. While the Strategic Learning Assessment Process appears theoretically possible, to what degree can it be practically applied?
2. Are certain structural levels -- organization, team, or individual -- assessed more or less effectively than others?
3. Are certain dimensions of learning -- speed, depth, or breadth -- assessed more or less effectively than others?

Three public elementary schools in Illinois were selected as sites for the study. Three years previously, each of the three schools had begun an intensive process of organizational transformation designed to make substantial improvements in the quality of teaching and learning in the school.

The study is being conducted in three phases. Phase 1 assesses the organization/business unit level, phase 2 assesses the team level, and phase 3 assesses the individual level. To date, only phase one has been completed.

The following is a description of the results of phase one, the organization/business unit level assessment. The assessment team consists of three individuals who were uninvolved in the change efforts in the three schools and who were knowledgeable of the Strategic Learning Model.

Step 1: Identify a Strategic Challenge. Three years ago, each of the schools had identified a small number of strategic challenges facing the school. For each school, the assessment team

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selected one strategic challenge to be assessed. In school #1, the challenge was to improve student achievement in reading. In school #2, the challenge was to improve student behavior in the classroom. In school #3, the challenge was to improve student achievement in mathematics.

Step 2: Track Actions Taken to Plan and Execute Change. The assessment team reviewed records that documented the change process that has unfolded in each school over the three year period. They also interviewed individuals involved in the change initiatives in each school, using an interview protocol designed to provide information that could be used to identify learning cycles and assess the speed, depth, and breadth of learning.

Step 3: Identify Learning Cycles. The assessment team identified that one full learning cycle had been completed in each school. Two of the schools were in the implementation phase of the second iteration. One school had completed the planning phase of the second iteration.

Step 4: Assess the Speed, Breadth, and Depth of Strategic Learning. The team made the following assessments of the speed, depth, and breadth of strategic learning at the organization/business unit level:

Speed – The assessment team calculated the number of months it took each team to complete each phase of the first iteration and a total time for the first iteration as displayed in Table 1.

Table 1. Assessment of Speed of Learning at Organization Level in Three Elementary Schools

Organization	*Planning Phase*	*Implementation Phase*	*Reflection Phase*	*Learning Cycle Total*
School #1	5 months	12 months	10 months	27 months
School #2	4 months	8 months	1 month	13 months
School #3	12 months	9 months	1 month	22 months

The speed of learning varied from 13 months to 27 months among the three schools. There was also considerable variation among the time devoted to each phase of the learning cycle. For example, school #3 spent 12 months developing its original plan, compared to four months for school #2. School #1 spent 10 months in the reflection phase, compared to one month for the other two schools.

Depth. The assessment team assessed the depth of learning as displayed in Table 2.

Table 2. Assessment of Depth of Learning at Organization Level in Three Elementary Schools

Organization	*No Learning*	*Single-loop Learning*	*Double-loop learning*
School #1			X
School #2		X	
School #3		X	

In all three schools, the plans developed during the second iteration were different from the plans developed during the first iteration. In two of the three cases, the assessment team concluded that single-loop learning occurred. School #2 discovered that increased follow-up and accountability were needed to ensure that teachers actually made desired changes in the classroom. School #3 discovered that increased care had to be taken to select a consultant who could provide effective staff development and teacher coaching. Both of these learnings resulted in alterations of the plans without changing the framing assumptions upon which the plans were based. Only in school #1 did the assessment team conclude that double-loop learning occurred. In this case, the

school did not see desired improvement in reading scores as a result of the initial plan. The new plan placed an increased emphasis on reading comprehension. The assessment team concluded that this change reflected a shift in the framing assumptions regarding what is necessary to improve reading achievement in the school.

Breadth. The assessment team assessed the breadth of learning as displayed in Table 3.

Table 3. Assessment of Breadth of Learning at Organization Level in Three Elementary Schools

Organization	*Evidence of Learning Transfer?*
School #1	Undetermined
School #2	No
School #3	Yes

For school #1, the assessment team was unable to determine if, in fact, learning transfer had occurred. Other schools aware of the school's experience have begun to put an increased emphasis on reading comprehension. However, it was not clear to the assessment team whether these efforts directly resulted from school #1's learning. For school #2, there was no evidence that the team's learning has been applied elsewhere. For school #3, there was clear evidence that, both in school #3 and in other schools, its key learning had been successfully transferred.

Conclusions and Discussion

The first phase of the pilot study provided evidence that the Strategic Learning Assessment Process can be successfully applied at the organization/business unit level. For all three schools, the assessment team was able to reach consensus assessments of the speed and depth of learning. However, the assessment team experienced two difficulties in assessing the breadth of learning:

1. In most cases, numerous changes to the plans were made from one iteration to the next. In order to assess the breadth of learning, the assessment team needed to select one key learning that would be examined to determine if learning transfer occurred. There appeared to be some arbitrariness in the selection process.
2. There was limited information regarding the process through which transfer actually occurred. As a result, the team needed to speculate whether an actual transfer of learning did or did not occur. In one case, the team was unable to make the determination.

The pilot study suggests two improvements to the process:

1. Obtain detailed information as the learning cycle is occurring, such as learning logs, audiotape recordings of meetings, and observer notes.
2. Create a more detailed interview protocol to assist the assessment team in gathering information that will reduce the arbitrariness of some parts of the assessment.

In addition to completing phase two and phase three of the pilot study (which focus on the team learning and individual learning levels), future research is planned to apply the organization-wide assessment to a range of organizations of different size representing different industry groups and facing a variety of strategic challenges. Research is also planned to examine the interrater reliability of the assessment process. A parallel research process is currently investigating how the Strategic Learning Assessment Process can assist in the diagnosis of intervention opportunities and the selection of intervention approaches for team learning facilitators (Jeris, May, and Redding, 1996; Redding 1996).

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The Realities of Communicating and Reporting Practices and Outcomes for Internal and External Evaluators

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This study investigated internal and external evaluators' practices and concerns about communicating and reporting evaluation findings. Approximately three-quarters (70%) of a random sample of American Evaluation Association members responded to a survey on this topic. Most evaluators adhered to traditional reporting formats. They were only moderately satisfied with their communicating and reporting efforts. Insufficient time and political/organizational complexity impeded success. Effective practice typically entailed high stakeholder involvement. Internal evaluation was found to be not only equally as prevalent as external evaluation, but different in important ways.

No aspect of evaluation is more fundamental than its use, in particular how we communicate about evaluation activities and report evaluation findings. Over the past 15 years investigations of the circumstances under which evaluations of projects, programs, and organizations are used by clients and stakeholders have yielded frameworks and models for explaining and facilitating evaluation use in a variety of settings (e.g., Alkin, 1985; Braskamp, 1982; Braskamp & Brown, 1980; Patton, 1986; Preskill, 1994, 1991; Torres, 1990; 1991). Much of this work has focused on how evaluations should be conducted to improve use, e.g., by attending to the specific context of the evaluation, by involving clients and stakeholders in the evaluation design, by reporting results in a timely manner. While specific factors about evaluation communicating and reporting have been addressed in the literature, there has been no systematic, comprehensive treatment of this topic. Moreover, what has been addressed has not been clearly grounded in problems and issues currently faced by evaluators practicing in a variety of settings.

In these settings evaluators face circumstances which continue to speak to the need for yet better understanding of how evaluation practice can be made more efficient and effective. For example, evaluators are experiencing increased : (a) demands for accountability and effectiveness in education and business domains; (b) change and complexity within organizations; and (c) acceptance and use of non-traditional evaluation methods (i.e., case study, ethnographic, qualitative designs) which require different, innovative reporting styles.

This study investigates internal and external evaluators' current practices and concerns about communicating and reporting evaluation findings. It addressed the following specific questions through a survey of members of the American Evaluation Association (AEA):

1. What methods and styles do evaluators use and with what frequency?
2. How satisfied are evaluators with their communicating and reporting efforts?
3. What factors most impede success in communicating and reporting?
4. Are specific practices for, experiences with, and perceptions about communicating and reporting different for internal and external evaluators?
5. What kinds of communicating and reporting activities have been most successful?
6. What kinds of practical experiences have been most instructive to evaluators about communicating and reporting?

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Methodology

Respondents The response rate for the survey was 70 percent (240), calculated on the basis of 343 possible randomly selected respondents. Of these 240, 16 (7%) identified themselves as never having been involved in conducting evaluations of programs, projects, or organizations. As requested, they returned the survey without completing the remainder of it. Of the 224 respondents who had conducted evaluation in the past, 33 (15%) identified themselves as not currently involved in conducting evaluations. These respondents then only answered portions of the survey focusing on prior evaluation activities.

The remaining 191 respondents currently working as evaluators were approximately equal split between internal evaluators (51%), and external evaluators (45%) employed in a variety of organizations. Overall, one-third are employed in higher education, equally split between internal and external evaluators. Next in frequency are external evaluators working for consulting firms (including self-employment, 15%), and internal evaluators in non-profit organizations (12%). On seven percent work for school systems, and almost all of these individuals are internal evaluators. The fewest numbers of respondents are employed in business and industry, local government, and health care organizations. Again, the majority of these individuals are internal evaluators.

The respondents' total years in evaluation practice represents an approximately normal distribution. That is, 27 percent have been conducting evaluations from less than one year to six years, 51 percent have been conducting evaluations from seven to fifteen years, and 22 percent have been conducting evaluations for 16 years or more.

Instrumentation and Data Analysis In addition to demographic items reported above, the survey included (a) Likert-scale items on evaluation practices, formats, audiences, and satisfaction with communicating and reporting efforts; (b) a checklist on factors which impede successful communicating and reporting; and (c) a critical incident question about respondents' most instructive/successful experiences with communicating and reporting. Of the total number of respondents, 61 percent (146) provided responses to the critical incident item. The illustrative cases they wrote varied in detail and length from 5 to 88 lines of text.

Descriptive statistics were calculated for 59 quantitative survey items using SPSS (Statistical Package for the Social Sciences). In addition, Mann-Whitney U tests were run to compare the responses of internal and external evaluators on the frequency of (a) their use of various communicating and reporting practices and (b) their reporting to various audiences. The illustrative cases were analyzed using The Ethnograph Software (Qualis Research Associates, 1987) for text-based data. In all, 110 codes in eight categories were generated for the analysis of these data. The categories are (a) type of program evaluated, (b) approach/focus/questions of the evaluation, (c) role of the evaluator, (c) communicating/reporting formats used, (d) audiences addressed, (e) successful formats/processes used, (f) factors impeding to success, and (g) outcomes of successful reporting. These categories and codes were modified in three iterative cycles to maximize their fit with the data.

Summary of Findings

The following points summarize our major findings. First, to communicate and report the findings of their work, practicing evaluators most frequently use traditional methods (see Table 1). That is, they: (a) write technical/final reports, (b) develop written evaluation plans prior to implementation, (c) write executive summaries, (d) specifically identify evaluation audiences, (e) make formal verbal presentations to clients and/or staff, (f) develop reporting plans.

Second, external evaluators tend to engage in these practices more frequently than internal evaluators. Also, external evaluators more frequently (a) conduct planned personal discussions in person or by telephone, (b) make conference presentations, and (c) submit reports of evaluations for publication. (See Table 1.)

Table 1
MEAN FREQUENCY OF EVALUATORS' COMMUNICATING/REPORTING PRACTICES
IN THEIR CURRENT POSITION BY TYPE OF EVALUATOR

	Overall		Type of Evaluator: Internal		External	
Communicating/Reporting Practice	Mean*	N	Mean	N	Mean	N
(Write) technical/final report	3.7	181	3.5	96	3.8**	85
Develop written evaluation plan prior to implementation	3.5	183	3.4	98	3.6*	85
(Write) executive summary	3.5	182	3.3	97	3.6**	85
Specifically identify evaluation audiences (either as part of the evaluation plan or separately)	3.2	182	3.2	98	3.3	84
(Make) formal verbal presentation to clients/staff	3.1	183	2.9	98	3.2*	85
Develop reporting plan (either as part of the evaluation plan or separately)	3.0	183	2.8	98	3.3**	85
(Conduct) working session (e.g. with staff for action planning /interpretation of findings)	2.9	183	2.8	98	2.9	85
(Hold) impromptu personal discussions (in person or by telephone)	2.8	183	2.6	98	2.9	85
(Write) short memo(s)/progress reports	2.6	183	2.6	98	2.7	85
(Hold) planned personal discussions (in person or by telephone)	2.5	183	2.3	98	2.8*	85
(Write) interim reports	2.5	182	2.3	97	2.6	85
(Make) conference presentation	1.9	183	1.7	98	2.2**	85
(Publish) journal article	1.3	182	1.1	97	1.6**	85
(Write for) newsletters internal to the organization/program	1.1	181	1.2*	97	.8	84
(Participate in) public meeting	1.1	180	1.0	95	1.1	85
(Provide) news release	1.0	182	.8	98	1.0	84
(Write for) newsletters external to the organization/program	.8	181	.9	97	.7	84
(Use) brochure	.6	182	.7	97	.6	85
(Use) photographs	.5	182	.5	97	.5	85
(Make) video tape	.4	181	.5	96	.3	85
(Hold) press conference	.4	182	.4	97	.4	85
(Make) television/radio appearance	.4	179	.3	95	.6*	84
(Use) skit/psychodrama	.06	182	.06	97	.04	85

Note. Response scale ranged from 0 to 4 where 0 = never and 4 = more than 75% of the time.
* Levels of significant differences between mean frequencies for internal and external evaluators are indicated as follows: * - .05 and ** - .01.

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Third, for both groups, little, if any, time is spent communicating findings through less traditional means: public meetings, external newsletters, brochures, photographs, videotapes, press conferences, television/radio appearances, and skits or psychodramas.

Fourth, the single greatest impediment to successful communicating and reporting is insufficient time to devote to this aspect of the evaluation endeavor (see Table 2). Political and organizational complexity poses another major impeding factor. Specifically, evaluators found the following aspects of conducting their work within organizations difficult: (a) lack of clarity among stakeholders about communicating/reporting needs, (b) unresponsiveness to communicating/reporting efforts, (c) client/audience turnover, (d) politically charged situations, (e) resistance to negative findings, (f) characteristics of particular individuals, and (g) misinterpretation of findings.

Fifth, evaluators are only moderately satisfied with their communicating and reporting efforts and outcomes. But, more experienced evaluators and external evaluators are more satisfied than other evaluators are. Yet, the longer evaluators are in their current positions, the less satisfied they are with their communicating and reporting (see Table 3).

Sixth, evaluators, however, did identify successful elements for each aspect of communicating and reporting--format, content, and processes. They described the importance of using various *formats* including short reports and summaries tailored to audience needs. The *content* of successful communicating and reporting efforts included clear language; graphs and charts; positive as well as negative findings; qualitative, contextual data as well as quantitative data; and specific recommendations. Ongoing, collaborative communication *processes* were the most successful. Respondents stressed stakeholders' involvement in the conduct of the evaluation as a whole, but especially in interpreting findings.

Discussion

These findings about actual communicating and reporting practices lead us to five major conclusions. First, it confirms much of what we have known to be good practice in evaluation--attending to the specific context of an evaluation, involving clients and stakeholders in the evaluation design, and reporting results in a timely manner to a variety of audiences using clear language. Success comes through communication and collaboration throughout the evaluation process, and from the presentation of information in such a way that it is easily assimilated. Communicating and reporting is part and parcel of the entire evaluation endeavor--not something undertaken at the end of the evaluation process. Second, we found that while some evaluators successfully implement these strategies, many others remain thwarted in their efforts by time, organizational, and political constraints. And, not surprisingly, evaluators are only moderately satisfied with their efforts. This leads to our third conclusion: Satisfaction with, and likely skill at, communicating and reporting comes with experience.

Fourth, we have found the practice of internal evaluation to be not only equally as prevalent as external evaluation, but also different in important ways. Comparing the two makes even clearer the challenges posed in working with complex, constantly changing, politically charged organizations. The meaning and implications of these conclusions are discussed further in terms of five major issues below.

Collaboration throughout the Evaluation The results of this study--particularly those from the illustrative cases--make clear that issues related to communicating and reporting evaluation findings are of concern throughout the evaluation process, not just at the time that end-products of the evaluation such as final reports are typically expected. Early, ongoing communication and collaboration were identified by evaluators in two ways: first, as strategies which would have improved, if not prevented, frustrating experiences they've had in communicating and reporting; and second, as what caused things to go right when they did. This finding echoes Patton's long-held position (1978, 1986) that evaluation use must be planned for at the beginning of, and attended to, throughout the evaluation.

Table 2
FREQUENCY WITH WHICH EVALUATORS INDICATED FACTORS IMPEDING SUCCESS IN COMMUNICATING AND REPORTING EVALUATION FINDINGS

Factors Impeding Success in Communicating and Reporting Evaluation Findings	Percent	N
Insufficient time available to devote to communicating/reporting	53%	118
Clients/audiences unclear about their communicating/reporting needs	46%	103
Client/audience unresponsiveness to communicating/reporting efforts	39%	87
Changes in audiences, organizational/program leadership	38%	86
Insufficient time for analysis/interpretation of findings	36%	81
Insufficient resources available to cover personnel cost for communicating/reporting	33%	73
Inaccurate/incomplete analysis of political context	27%	59
Too many different formats necessary for communicating/reporting to different audiences	26%	58
Misuse/misinterpretation of formal communications/reports by clients/audiences	24%	53
Lack of planning for effective communicating/reporting	23%	52
Misuse/misinterpretation of informal communications/reports by clients/audiences	18%	41
Difficulty in balancing positive and negative findings	17%	38
Language/style used in communicating/reporting not clearly understood by audiences	15%	34
Difficulty in integrating findings across multiple sites	13%	29
Inadequate/insufficient training in communicating and reporting	11%	25
Insufficient resources available to cover materials costs for communicating/reporting	10%	23
Insufficient resources available to cover technology costs for communicating/reporting	10%	22

Table 3
EVALUATORS' MEAN LEVEL OF SATISFACTION WITH COMMUNICATING AND REPORTING EVALUATIONS BY YEARS CONDUCTING EVALUATIONS AND YEARS IN PRESENT POSITION

	Conducting Evaluations		In Present Position	
Years	Mean	N	Mean	N
Less than 1 year	2.5	2	4.2	9
1 - 3 years	3.0	19	3.4	48
4 - 6 years	3.3	36	3.4	41
7 - 10 years	3.3	56	3.4	37
11 - 15 years	3.5	53	3.4	29
16 - 20 years	3.8	26	3.6	13
20 + years	3.8	25	3.2	9
TOTALS	3.3	217	3.4	186

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Communication and collaboration takes time--the single factor most plainly implicated in this study. For these evaluators time well spent would find them (a) communicating with participants and stakeholders of varied levels about evaluation purposes and processes; and (b) involving these individuals in the design, data collection, analysis, interpretation, and follow-up phases of the evaluation. They found that doing so informed and educated clients/audiences about evaluation, sensitized evaluators to individual perspectives and organizational contexts, clarified mutual expectations, and increased client/audience capacity for using the evaluation findings--whether it be to shape their understanding of the program or to make a specific decision. In short, their responses confirmed that involving clients/audiences in a well-conceived evaluation process increases the credibility of the effort, enhances audiences' understanding of both evaluation and the program, and increases the possibility that reflection and action will follow.

Communication and collaboration alone, however, did not account for the evaluators' successes. Evaluators had provided information in a form that could be quickly and easily assimilated--using verbal presentations, discussion, and interaction at meetings and in informal exchanges; short, cogent reports; clear, jargon-free, familiar language; and graphics and other formats which relate and integrate information visually. The content of these communications included quantitative and qualitative information, descriptions of context, positive and negative findings, and specific recommendations.

Social Science Research Orientation The single major impediment to successful communicating and reporting cited by evaluators is time. Of particular concern is the time it takes for the analysis and interpretation of findings. Moreover, analysis and interpretation of findings is a consuming aspect of developing final reports--which is the most frequently practiced means of communicating and reporting findings. On average, respondents in our study indicated they write final/technical reports between 75 and 100 percent of the time they do evaluations. Indeed, typical expectations dictate that evaluators generate lengthy, comprehensive final reports. In this regard, current evaluation practice is following social science traditions and basic research training most evaluators received and continue to provide students of evaluation. This tradition is generally reflected in many texts on evaluation (see e.g., Popham, 1993; Posavac & Carey, 1992; Worthen & Sanders, 1987) as well as The Program Evaluation Standards (Joint Committee, 1994). Scriven (1993) explicitly links evaluation reports which look like social science research reports with attempting to show that program evaluation is applied social science. He finds this format "almost useless for most clients and audiences" (p. 77). Alkin (1990, p. 160) worries "about the extent to which...[evaluators] become so involved...with the end result of producing a report for peer review, that [they] fail to serve the evaluative needs of the situation."

Likewise, our findings strongly suggest that evaluators may be spending too much time generating such reports in lieu of other reporting methods. It is unclear that such reports provide the most cost effective means for communicating evaluation findings in ways most useful to stakeholding audiences.

Given the heavy reliance on final/technical reports and evaluators' dissatisfaction with their communicating and reporting efforts and outcomes in general, it is worthwhile to consider the potential of using non-traditional communicating and reporting approaches for different types of evaluation activities. Important questions for evaluators to consider are: Should formative evaluation studies result in long, summative reports? Would other methods--photographs, debriefing sessions and newsletters, for instance--lead to greater instrumental and conceptual use? As one respondent commented, "Frankly, we have more creative ideas about reporting/communicating than we have time to implement. Time and resources are constraining." Our greatest challenge may be to give up the familiar for the new in our practice.

Political and Organizational Complexity Let's turn now to the other major obstacle to successful communicating and reporting--political/organizational complexity. The majority of impediments evaluators frequently cite relate to working with the individuals and organizations of the programs being evaluated. The issues facing evaluators include lack of clarity about needs for communicating and reporting, unresponsiveness, organizational and personnel changes, and inaccurate or incomplete analysis of the political context. Evaluators specifically described

politically charged situations dealing with hidden agendas, turf protection, and gatekeeping. They detailed instances where resistance to negative findings hindered their efforts, and in some cases misinterpretation of results prevailed. Finally, our respondents sometimes implicated specific individuals who lacked training, competence, and/or political savvy.

Yet, some evaluators have been able to manage these challenges by taking a more collaborative approach, useful in mediating these complexities. Collaboration in evaluation is powerful: it can enhance use by different audiences, it values individuals' experiences and opinions, it can contribute to a sense of ownership, it can produce better understanding and depiction of the context, it can lead to more useful recommendations, it can educate clients/audiences about the program and evaluation, and it can help identify and resolve conflicts before the end of an evaluation. It embraces different perspectives and lets many voices be heard.

Internal and External Evaluation Approximately one-half of the 191 evaluators responding to our survey who currently practice evaluation are internal evaluators. While we do not know how much internal evaluation has been practiced in the past, these results suggest that it is now at least equally as prevalent as external evaluation. This equity is important to consider since most evaluation models used in the training of evaluators were developed from the perspective of external evaluators (see e.g. Guba & Lincoln, 1990, Scriven, 1973; Stufflebeam, 1983; Stake, 1983).

While the existing literature tells us "something about internal evaluation...there remains a great deal to be described and understood" (Mathison, 1991a, p. 164). This study contributes to that understanding by documenting clear differences between the practice of internal and external evaluation. Internal evaluators less frequently engage in many practices commonly expected to facilitate use--namely, developing evaluation and reporting plans, writing executive summaries, making formal verbal presentations, and holding planned personal discussions (see Shadish, Cook, & Leviton, 1991; Patton, 1986). Relatedly, internal evaluators in our study cited lack of planning for communicating and reporting significantly more frequently than did external evaluators as an impediment to success.

These circumstances are likely, in part, to be caused by the organizational and role complexity internal evaluators experience (Mathison, 1991b). Increased demands on internal evaluators to respond to organizational needs and circumstances mitigates time and energy they might otherwise have for more effective communicating and reporting practices. Moreover, internal evaluators are significantly less satisfied with their communicating and reporting efforts than are external evaluators. The issue is not so much that different practices are more effective for one type of evaluation than the other; but rather, internal and external evaluators face different challenges in carrying out effective communicating and reporting strategies.

Satisfaction Comes with Experience Given what we have learned from our research on communicating and reporting, it makes some sense that while satisfaction is generally low, it does increase with experience. Only after at least four years of practice did our respondents' overall satisfaction shift, albeit slightly, to the positive. Increased skills and confidence likely contribute to greater satisfaction. With more experience evaluators better understand various organizations and audiences. In spite of this learning, however--time, resources, and political and organizational complexity--still pose challenges to the success of communicating and reporting efforts. Here again we find affirmation of what evaluators have now long discussed among themselves: Evaluation is a complex, interdependent, demanding, and challenging endeavor. Yet, rather than be discouraged, we find ourselves emboldened--striving to seize the opportunity by comprehending those predicaments we face and our role in them.

Based on our findings about what works and doesn't work, continued discussion and study among ourselves of what it means to practice both internal and external evaluation, how we can train future evaluators, how we can make evaluation information easier to assimilate, and how we can enrich evaluation practice and outcomes for both clients and evaluators is more vital than ever (see Torres, Preskill, & Piontek, in press).

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Teambuilding Intervention Strategy Deployment: A Case Study of Two Midwestern Manufacturing Industries

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A qualitative case study using the "Excellence" approach was used to investigate the differences, for midsized manufacturing industries, between those who experience marked success in implementing employee empowerment strategies and those who encounter considerable difficulty doing so. Results indicated that a consultant-based teambuilding intervention strategy with specific components can enhance a company's opportunity for success.

Employee involvement is often seen as a desirable method of enhancing productivity and quality in an organization and is often implemented with various forms of work teams. Success has often been reported with this method (Bersic, 1992; Berrey, Avergun, & Russ-Eft, 1993; Pinto, Pinto, & Prescott, 1993; Mueller, 1994; and Gemmill & Wilemon, 1994). However, one major shortcoming is that many employee involvement programs tend to be activity-centered (management-driven) rather than goal centered (consultant-based). Programs which are management-driven tend to be short lived and ineffective. One major difference between management-driven and consultant-based projects appears to be the developmental process by which they are implemented — the company's *intervention strategy deployment* method. Precise differences between successful and unsuccessful projects in terms of intervention strategy deployment have not yet been clearly established. This study hopes to clarify the reasons for differential results obtained in similar companies when the same approach is used under different managerial norms.

Research Question:

What are the differences for midsized industries between those who experience marked success in implementing employee empowerment strategies and teambuilding processes and those who encounter considerable difficulty in doing so?

Methodology:

A case study approach was used to investigate employee empowerment and teambuilding success in two midwest industries which used different methods of intervention strategy deployment. The companies had at least 10 significant characteristics in common. These included: (1) Similar size; (2) Geographic location in the midwest (the companies were less than 50 miles apart); (3) Both are market leaders in their fields; (4) Both serve mature markets; (5) They are

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developing new processes or products to remain competitive; (6) Both are quality conscious and are striving for ISO certification or the equivalent; (7) Both use labor-intensive processes for production; (8) A mixed gender work force and supervisory structure exists in both; (9) They are union shops; and (10) They previously tried worker empowerment intervention but were unsuccessful.

Procedure:

Different intervention strategy deployment methods were used in these industries (let's call them Company X and Company Y). Company X is a manufacturer of aftermarket parts (various types of sieves, chafers, and other parts) for combines. They also fabricate original equipment parts for new brand-name farm equipment that is assembled by large plants in the midwest. Company X used a management-driven intervention strategy deployment method. For example, after a failed attempt at employee empowerment, management totally reconstituted the planning and training committees. Although these committees had different membership, they retained the same names by which they had previously been known. When the consultants were brought in to assist with the employee empowerment effort, these committees dictated how, when, and to whom intervention strategies would be directed. They were seen by the workers not as groups of empowered workers, but as agents of management.

Company Y is a health technologies concern which produces custom orthotic devices for podiatrists and their patients. This company used an intervention strategy which was consultant-based. Because they had drawn a different lesson from experiencing failure, they opted to follow the consultants' advice concerning intervention strategy deployment from the initial contact throughout the process.

Very similar advice was given to both companies in the development of their empowerment process. This provided the consultants with an excellent opportunity to compare results. A ten step process (Brauchle and Wright, 1993) was recommended to help develop functional and cross-functional teams in both plants. This procedure involves (1) Establishing credibility with the teams, (2) Allowing for ventilation of frustrations, (3) Providing an orientation to training procedures, (4) Getting the teams to invest in the process, (5) Helping them set group goals, (6) Facilitating the group development process, (7) Establishing intragroup procedures for conducting the business of the teams, (8) Establishing intergroup processes for communication with other teams and management, (9) Changing the role of the consultants, and (10) Ending the consultants' involvement.

The advice given to both organizations was consistent with that recommended by Wright & Brauchle (1994) in terms of a focus on achieving four major objectives: (1) Obtaining management support, (2) Establishing and training a Steering Committee, (3) Understanding the corporate culture, and (4) Setting realistic expectations.

Materials used to train the teams included the check sheet (Brauchle & Wright, 1995) which the authors have successfully used over a period of time with other firms. The use of the check sheet insured that the procedures used in training the teams were reasonably similar for both companies and that the training events occurred in similar sequences.

A qualitative excellence model (Peters & Waterman, 1982) was used to establish reference points for conducting the comparison between the two companies. The model used the eight criteria that Peters & Waterman had used to identify the best run American Companies: (1) A bias for action, (2) Staying close to the customer, (3) Autonomy and entrepeneurship, (4) Productivity through people, (5) Hands-on, value driven, (6) Stick to the knitting, (7) Simple form, lean staff , and (8) Simultaneous loose-tight properties.

We found that the two companies were very similar on four of these eight criteria, (#1, 2, 5, and 7). However, by the end of the study, the companies had manifested qualitative differences on the remaining four of the criteria (# 3, 4, 6, and 8). A discussion of those specific differences follows:

Criteria #3: Autonomy and entrepeneurship — When the project started, both manufacturers looked very similar in terms of the way their operations were allowed to run. In both cases, experimentation and innovation were not only accepted but were encouraged. Major decisions were made on site by both plants. However, late in this investigation the semi-autonomous status of company X was revoked by the parent company. The general manager was relieved of his duties and the parent company instituted stronger controls by naming an off-site manager who worked several days each week at the plant.

Criteria #4: Productivity through people — The companies were very different in terms of their gain-sharing programs and the involvement of the employees in the operation of the business. In company X, gain sharing was rolled out to the labor force by management. The company had promulgated a gain sharing plan which was not accepted by the workers and was not having the desired effect on productivity and morale. In company Y, cooperative effort that represents all levels was used to craft a gain sharing plan that everyone could accept. In fact, the Steering Committee of the empowerment effort was used because of its excellent company representation and personal reputation as the core of the group that worked on the gain sharing package.

Criteria #6: Stick to the knitting — Company Y, the orthotics company, continues to focus on craftsmanship with the products they know best by continuously improving the quality of those products and the processes for producing them. Company X, the farm implement manufacturer, has taken on an entirely new product line as required by the parent company, and is experiencing difficulties in producing the new product on time, on budget, and to specifications.

Criteria #8: Simultaneous loose-tight properties — Company wide involvement in constructing mission statements which incorporate the key values of the business are apparent *only* in company Y.

The consultants worked with both companies from the latter part of August 1995 to January, 1996 to enhance the deployment of their empowerment efforts. Approximately equal time was spent at each company, where the consultants usually worked one day per week and met with one or two groups during each visit. Occasionally the consultants conferred with management or HRD personnel at the sites, but most visits were with functional or cross functional teams. The goal in both organizations was to bring the governing or steering groups to a high state of effectiveness, improve the readiness of workers to accept the teambuilding intervention strategy deployment that the consultants recommended, and to organize and bring to acceptable levels of performance one or two functional and cross-functional teams in each location.

At the end of the four month time period, the relative success of teambuilding efforts was evaluated for both concerns in terms of perceived productivity of the teams, member satisfaction in both functional and cross-functional teams, willingness of members to assume key roles necessary to the effective functioning of a team (moderator, recorder, etc.), willingness to be trained, and positive attitudes towards the development of a gain-sharing plan.

Results and Conclusions:

As a result of this study, a number of conclusions seem appropriate in explaining similar midsized manufacturing industries that experience differential success in implementing employee empowerment programs.

Several differences presented themselves. In Company X, the management-driven intervention process yielded very mixed results. Team effectiveness, empowerment, support, and positive changes in the organizational culture were inconsistent with company and consultant expectations. Intervention efforts were often shifted by management from a training and development focus to a labor/management focus. The future of this intervention effort remains in doubt. These findings seem consistent with Mueller's (1994) observation that when companies design teams and the work they accomplish, they do so according to their organization's objectives, not according to a best model. By contrast, Company Y used the consultant-based

approach very nearly as recommended by the consultants. There the employees are truly involved in the process, which is proceeding on schedule and in a positive direction consentually determined by management, the work force, and newly developed work teams.

Three other specific conclusions seem appropriate:

1. When deploying a teambuilding intervention strategy, consultants should take great care to assure than management both supports and understands the process.

2. The consultant-based approach described for company Y seems clearly superior to the management-driven approach used by company X in terms of perceived productivity, member satisfaction, willingness of team members to assume key roles, willingness to be trained, and positive attitudes toward the development of a gain-sharing plan.

3. It seems clear that an effective teambuilding intervention strategy deployment is a comprehensive one which includes the following characteristics: (a) A high level of support and understanding from management; (b) Time commitment to empowering workers; (c) Involvement of significant cross-sectional groups of workers in planning the strategy; (d) Judicious use of a carefully selected steering committee; (e) Frequent meetings with upper management, HRD personnel, and key production workers; (f) A proactive rather than a reactive stance by teams and individual team members; and (g) Use of an organized and systematic method of developing team skills.

Summary

In the course of this research activity, the consultants wanted both companies to succeed in their teambuilding processes because it was in their professional interests to achieve the same degree of success with both clients. When the consultants agreed to assist these companies they believed there was promise for both. Nobody likes to fail; however, when results are less than anticipated an examination of those factors associated with failure can be instructive. Hence, the use of the "success" model for analysis.

Although this model has often been used to differentiate successful and unsuccessful companies by analyzing their procedures and practices, it has been used here to show that a consultant-based team building intervention strategy with specific components can enhance a company's opportunity for success.

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Installing, Training, and Rewarding Teams with "Pay for Knowledge": A Case Study

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Case studies of "high involvement management" indicate installations of teams, pay for knowledge systems, and similar methods may go through several phases. This study describes the phases of an installation of teams and training of supervisors and team members in a manufacturing facility in the Midwest. An innovative "pay for knowledge" system is described. Barriers to success are identified, as well as results of the installation.

Much has been written about "high involvement management" (e.g. Mohrman, Ledford, Lawler, & Mohrman, 1986; Pasmore, 1988; Lawler, 1992), its theoretical basis and its advantages and disadvantages. However, only a handful of case studies (e. g. Walton, 1975, Winter, 1977; Trist, Susman, & Brown, 1977; Poza & Markus, 1980, Winter; Manz, Keating, & Donnellon, 1990) have been written about implementing a high involvement management system- a system in which all systems (technical, human, information) are integrated to maximize employee involvement. Using Yin's (1994) guidelines for case studies, this paper addresses the research problem: "How can a wide variety of high involvement initiatives be successfully introduced into an organization which was formerly managed in a conventional way?" The theoretical framework supporting the change process described in this study is found in Lewin's (1951) description of driving and barrier forces which gather around an organization change effort. The unit of analysis for the study will be described and a time-series analysis, based on contemporary documentation, survey data, participant interviews, and documented results of group discussions will record the events in the installation. The study concludes with an examination of the preliminary results of the installation and a critique of the methods used in it.

The unit of analysis for this case study is the Production Department of Tetra-Rex Packaging Systems, Inc. of Minneapolis, MN. Tetra-Rex manufactures machines which fill and seal gable-top containers for the milk and juice market. Tetra-Rex is a division of Tetra-Pak, based in Lund, Sweden. Tetra-Rex has a total of 300 employees, with 125 assigned to the production department. The production department is headed by a production manager. At the beginning of this project, there were seven supervisors reporting to the production manager, as well as supervisors for various support functions. Each supervisor headed up a production line which manufactures one of four models of Tetra-Rex machines or a support function which supports the production lines.

Case Studies of Previous High Involvement Insta'lations

Five case studies have been found to be instructive in analyzing the events described in this study. The earliest relevant case studies examined were those of the installation of socio-technical methods in manufacturing companies (Walton, 1975, Winter, 1977). The units of analysis in the earlier study were eight firms- two from the United States, two from Canada, one in Great Britain, two in Norway, and one in Sweden. A pet food plant was the unit of analysis in the 1977 study. Walton is not explicit about his methods in either study, however it appears he used a combination of his own direct experience with some of the cases, as well as an examination of case documents about. Walton found a general, seven-step model in the installation process in the 1975 study: 1) initiation of the pilot experiment, 2) pilot experiment declared a success, 3) recognition and resources provided for further work restructuring, 4) more general interest in work restructuring aroused, 5) change agents' interventions extend throughout the corporate system, 6) facilitative

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networks developed, and 7) personnel movement occurs (those who fit into the new system stay, those who do not fit move on). He found five phases in the pet food installation: 1) pre-start up (design of social and technical systems before plan is implemented), 2) technical/social start-up (employees are hired and trained, technical systems are installed according to project design), 3) pushing the technology (emphasis placed on increased productivity at the expense of social needs), 4) turmoil, decline, and reversal (conflict, "storming" within and between teams), 5) steady state with traces of erosion. Walton concluded that significant barriers arise to prevent the diffusion of high involvement methods from a pilot installation to an entire organization: regression in the pilot, a poor model for change is used in the installation process, confusion exists over what is to be diffused, deficient implementation methods are used, lack of top management commitment, inappropriateness of concepts employed, union opposition, bureaucratic barriers, threatened obsolescence (middle managers fear being laid off), self-limiting dynamics (pilots seal themselves off from the rest of the organization).

Trist, Susman, and Brown (1977) published an extensive case study of the installation of socio-technical methods in American mines. The unit of analysis was two experimental sections of two unionized mines. The research team used personal observation and documentary evidence to chronicle the case. They observed these phases: 1) creation of labor/management steering committee, 2) selection and training of autonomous section members, 3) socio-technical analysis of sections, while work crews worked under new system, 4) extending autonomy to the mine as a whole, 5) initiatives after vote by union to stop experiment. The research team documented these results of the initial experiments: safety improved, accidents were reduced, absenteeism went down, costs of production were reduced, attitudes improved. Productivity was not found to be significantly improved in the experimental installations.

In response to Walton's article describing barriers to the extension of high involvement methods beyond pilots, Poza and Markus (1980, Winter) described the installation of teams and other high involvement methods in a paint plant in 1977. The authors are not explicit about their methods of documentation, but it appears they relied on personal observation and documentary evidence they collected. The unit of analysis was a 1,400 employee plant which manufactured paint for the automotive aftermarket. Within this plant, work flow had been redesigned following socio-technical principles, the organization chart had been "flattened," teams had been established, and employee compensation had been redesigned to encourage "learn and earn." The authors found these phases: 1) recruitment and selection of new employees, 2) orientation and training in new methods, and 3) team building. Results of the installation were reported as: better team coordination, increased sense of responsibility to plant objectives, and improved problem-solving. Operational improvements included reduced payroll costs through reduced headcount, reduced absenteeism, productivity improvement, and improved quality.

Most recently, Manz, Keating, and Donnellon (1990) reported their experience introducing employee involvement methods and the effect of this project on mid-level supervisors and managers. The unit of analysis was a non-union wholesale distributor and retailer of architectural, engineering, and commercial art supplies and furnishings. The authors state explicitly that their methods for data gathering included consultant observation, multiple interviews and discussions, and video tapes of key interactions. Four "themes" appeared: 1) initial suspicion, uncertainty, and resistance, 2) gradual realization of the positive possibilities in the new work system, 3) wrestling with a new role, and 4) learning a new language.The authors concluded that the resistance exhibited by mid-level managers to a transition to self-managing work teams stems from factors similar to those identified by Walton- fear of threatened obsolescence.

Sequence of Events

As the above studies illustrate, while there may be certain stages of implementation common to high involvement installations, each project is unique. The phases of this installation are described below, as well as similarities and differences between this installation and the ones cited above.

Phase I- Consideration of pros and cons of teams and "pay for knowledge" (February, 1994). The secondary author was appointed as production manager of the production department in January, 1994. The Minneapolis Tetra-Rex facility had been managed in a conventional, hierarchical manner for the five years that Tetra-Pak had owned the facility. Upon appointment to his position, the production manager advised department supervisors

of his intention to make a transition to high involvement management, and he began to raise the awareness of supervisors about these methods. While a student the production manager studied high involvement methods, including numerous case studies of team installations in Japan, the United States, and Sweden. The production manager made a presentation on how employee involvement can be increased and how the role of supervisors will change. The production manager announced that all of the department's supervisors would attend a seminar in San Francisco in early April, 1994, to increase their awareness of high involvement methods and to gain tools they would need to install these methods at Tetra-Rex.

At the seminar, the supervisors heard presentations on teams and a "pay for knowledge" system. "Pay for knowledge" is defined as a reward system which "provides for payments to employees based on what they are capable of doing" (Lawler & Ledford, 1985). A pay for knowledge system supports high involvement, because employees are encouraged to seek personal development. The supervisors heard that a pay for knowledge system can yield many benefits, including: increased work force flexibility, improved product/service quality, higher organizational flexibility, greater customer awareness, and increased employee motivation to grow on the job. The supervisors also heard about problems associated with pay for knowledge systems: increased compensation costs, increased training costs, employees "top out" by reaching a point where they can not receive any more training, and increased administrative complexities.

After attending the seminar, the production manager posed the question to each supervisor- "Do you want to be a part of this change?" Each supervisor said they did. The production manager then undertook to inform the entire Minneapolis organization- departments within his control and departments out of his control- about the why, when, and how of the changes that would be taking place in the production department. It was also announced that the supervisors would be leading the change effort- they would be part of deciding how changes would be made in the department and then their people would be informed of the changes. While the supervisors were being developed to take on new responsibilities as team leaders, their employees would be developing in a parallel course to take on duties the supervisors had formerly carried out.

Phase II- Assessment of organization readiness (mid-April, 1994 to July, 1994). At the San Francisco seminar, the supervisors learned of the Assessing Organizational Readiness tool (1985). This survey examines a number of factors, including: confidence and trust shown by boss, freedom to talk about job, encouragement for innovation, motivational approaches (fear, threat, punishment, rewards, involvement), personal ownership in organizational goals, present level of team work, information flow and acceptance of downward communication. The assessment was given to all employees in the production department and work area and department-wide results were calculated. Generally, the assessment results showed that the department, as a whole, was not ready for wide-scale implementation of employee involvement. An action plan was developed by the management team to address several issues raised by the survey results. The management team also decided at this time to delay the installation of the pay for knowledge system, until the barriers to employee involvement could be addressed.

Phase III- Pilot installations (April, 1994 to late 1994). While the department-wide results indicated lack of readiness for the planned change, some departments did show some readiness. Based on three criteria: survey results showing readiness for change, supervisor willingness, and urgency of need for improvement- three departments established teams. From early 1994 to late that year, supervisors of three work areas structured teams in their departments. These attempts at team structure became pilot projects for the department. All supervisors in the production department briefed their work groups on participative decision-making, and started to share decision-making on work-flow, scheduling, and some personnel issues.

Changing roles and responsibilities. As the pilot projects progressed, roles and responsibilities of supervisors and employees shifted. For supervisors, administrative responsibilities, which were formerly reserved to the production manager, were delegated downward, including budgeting and planning for training of their people. Supervisors were expected to facilitate the setting of department objectives, the scheduling of work, and forward planning. In addition, supervisors were expected to lead process improvement projects. Supervisors were also charged with serving as deputies for the production manager, and to integrate the efforts of their departments with out-of-department entities. Throughout this transition, supervisors were expected to involve employees in department decisions. Employees were expected to take on some

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of the responsibilities which had been formerly reserved for their supervisors, including setting their own production and personal development objectives and participating in department improvement meetings. The flow of information to employees about operations, finances, sales, customer feedback, and new product development was increased. Minutes of production department meetings were distributed throughout the department to help employees understand where the department stood on its schedules and planning. While cross-training was encouraged throughout the department, only pilot teams actually implemented it.

Realization of barriers to wider implementation. As the pilot installations progressed, there were signs pointing to success. First, there was a higher level of motivation in teams in areas which needed "fixing," thus confirming this as a criteria for setting up teams in these areas. Second, new hires who had not been acculturated under the old management system were more open to the new system. Third, when employees were given opportunities to set their own goals, and run their own improvement projects, pilot teams responded more positively. Finally, if employees were openly encouraged to try new approaches, the teams seemed to respond more positively.

Systemic barriers also arose to prevent the wider implementation of employee involvement methods from pilot projects to the whole department. These barriers included "pilot vs. non-pilot" conflict. While members of pilot teams felt pride in their progress toward self-management, non-pilot employees said, "This will never work here. We don't need this here." Such conflicts were also seen between pilot and non-pilot supervisors. Similarly, conflicts between pilot teams and other departments of the company were also seen. Since pilot teams were being held more directly accountable for team results, they were insistent that quality parts and components be provided to them. Those departments providing parts to the teams were sometimes resentful of having production workers tell them about the delayed or poor quality of parts. Corrective Action Teams were established to make links between the production department and other departments, but these teams did not succeed. In addition, because of Tetra-Rex' history of "revolving door" management, some employees were heard to say, "This is Johan's (the production manager's) program. What happens when he leaves? Is this the 'management flavor of the month.'" Finally, there was a lack of upper management support for wider implementation of employee involvement. In December, 1994, the production manager determined that the department and its supervisors needed additional tools to make this project work, so he contacted the primary author for assistance.

Phase IV- Assessment of training needs/Development of pay for knowledge (February, 1995 to October, 1995). The primary author recommended to the production manager that an in-depth assessment should be conducted of organization readiness for employee involvement. This recommendation was accepted by the production manager. An in-depth assessment began in February, 1995. Three sources of data were used: work observation, interviews, and surveys. The assessment was based on a model of team work effectiveness developed by the primary author (see Figure 1). The assessment examined work structure (variety, significance, autonomy, feedback, identity, based on Hackman & Oldham, 1980) , team structure, relationships, problem-solving, conflict resolution, and regeneration/transformation. Based on this assessment, recommendations were made including establishing a Steering Committee to guide the work of the Corrective Action Teams and coordinate their efforts with the production teams; training for supervisors on team skills and concepts, including: Why Teams?, Group Processes (Bormann & Bormann, 1976; Tuckman, 1965) Communication Barriers, Problem-solving (Isaaksen & Treffinger ,1985), Leadership (Myers, 1962; Shutz, 1968), and Conflict Resolution Skills (Fisher & Ury, 1981); and, finally, after supervisors have received this training, they should receive first-line leader assessment and training. The topics would include: Assessment of First-line Leader Skills (Hardt, 1994), Boundary Management Skills, Empowerment and Authority, Interviewing and Selection of the "New Worker," Training and Orientation, Motivation, Mentoring and Coaching, Appraising Performance Using 360° Feedback, Personal Development Planning.

While the team assessment was being conducted, the pay for knowledge system was being developed. The Employers Association was contacted for help in installing this system, which had been put "on hold" since April, 1994. Lynn Ribble, staff consultant for Employers Association, was the lead consultant on this aspect of the project. Following steps similar to those suggested by Lawler and Ledford (1985) and Schuster and Zingheim (1992), employees were first involved in listing tasks that were performed to assemble and test a machine. When all tasks were identified, employees were surveyed to determine the relative difficulty, complexity, and impact of the tasks

Figure 1- Model for Successful Teams.

on the production process. Functional task lists were developed for assembly, warehouse, subassembly, and support shop areas. Besides these functional lists, team- oriented lists were also developed, including "team work" and "work ethic." These lists were eventually used as part of the peer review system. All lists were validated by panels of experts, who examined the employee survey results, and finalized the task lists. Finally, an administrative support system and Pay for Knowledge Manual were developed to facilitate the implementation of the system.

Phase V- Department-wide implementation of teams (March, 1995 to July, 1995). The department-wide implementation of teams and pay for knowledge started in March, 1995, and can be divided into four elements:

Supervisor training. Following the recommendations of March, 1995, the eight supervisors and the production manager all went through two rounds of training- team training and first-line leader training- between March and August, 1995.

Force-field sessions. For those production groups which had not been working in a team structure, the introduction of this approach meant change and some resistance. To help these groups understand why this change was being introduced and how it would benefit them and the organization as a whole, it was decided that "force field" sessions should be done. These sessions consisted of the lead consultant for the team-installation side of the project explaining the principle of force field analysis (Lewin, 1951). A force field diagram was drawn on a white board, and session participants were encouraged to list some of the driving and barrier forces that the employees thought were being brought to bear on Tetra-Rex to change its work structure. Session attendees generally responded positively to these sessions.

Team training. Three rounds of team training were conducted between July and October, 1995. The first round of training involved three production departments, and included topics recommended in the most recent assessment. Teams used this training to generate problem-solving projects. After this round, feedback from participants and supervisors prompted the shortening of the next round of training to five sessions. This format for team training was presented to two groups of approximately 25 participants each, between September and November, 1995. A supervisor was a co-instructor for the last group of trainees, and teams continued to do problem-solving projects.

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Pay for knowledge system. The pay for knowledge system was finalized in early fall, 1995. The system was set up to facilitate a cultural shift from the old "pay for seniority" system to a new value system, which encouraged the acquisition and sharing of new knowledge. The system was established with these principles: the system must be structured, so everyone understands it and so there is no "cutting of corners." The system must be made visible, understandable, fair, and must provide an incentive to train oneself and train others. As the system took shape, it was decided that there would be no recognition of seniority, a shift that would require a major change in attitude for many workers. Under the system, workers would be paid for the number and variety of skills they could exhibit. As part of carrying out the principles of the system, peer evaluation was made a part of it. Team members would be evaluated on objective criteria relating to performance of job skills, as well as more subjective criteria, highlighting member-to-member relations and "work ethic." A Code of Conduct was instituted to encourage the fair, even-handed treatment of all team members.

Using the Pay for Knowledge Manual, initial skill assessments of all production employees were conducted in October, 1995. Based on these skills assessments, employees were assigned to new pay classifications. While there were some employees who were unhappy with their reclassifications, generally, employees accepted the system. Peer reviews of three skill areas- teamwork, housekeeping/safety, and work habits- were also conducted at this time. As the system rolled out, four issues emerged. First, some workers were assessed as being overpaid, based on their skills. Conversely, some employees were assessed as underpaid, based on seniority and their skills. Inequities caused some friction and resistance to the new system. Employees, who had been members of teams, were ahead of their non-team peers as measured by the system. Second, team members raised the issue of where they should put their priorities- on training each other or shipping machines. Similarly, a third issue arose. Some team members questioned the fact that if they spent time teaching others their skills, they could not spend this time learning new skills themselves. Finally, lack of resources from the internal human resources department was a barrier. As team members were assessed, they became aware of their training needs. However, the internal human resource department was not positioned to support the meeting of their needs. The production department leadership realized that basic human resource policies (e.g. attendance, tardiness, other codes of conduct) were needed to make the pay for knowledge system work.

Phase VI- Regeneration and transformation (July to December, 1995). The "lessons learned" from this installation can be divided into three categories: training results, organizational results, and transformations. Swanson and Sleezer's (1987) Training Effectiveness Evaluation (TEE) method was used as the basis for evaluating *training results.* First, the *professionalism* of the training was evaluated in some training sessions. The training received ratings in the range of "good" to "very good." Comments from participants were generally positive. Evaluation of this nature was done selectively, because the first two groups to go through this training were so resistant to the transition, it was felt that such an evaluation would not yield valid results. Supervisors of the first two training groups were interviewed after the training, and they indicated that the training was received "as well as could be expected, considering the attitude of the participants." The meeting of *training objectives* was evaluated by assigning each team to develop a problem-solving project to present at the end of the course to the production manager. Examples of these projects included: installation of improved compressed air delivery system, improvement of various component systems (e.g. machine labeling, "chiller" units, electrical cabinets), improvements in documentation of instructions and work procedures, redesign of compactor for crushing test packages, redesign of equipment and tools used in assembly of machines. The ability to develop these projects provided ample support that learning objectives were substantially met.

Organizational results. Since June, 1994, lead times have been reduced by 50%, and there has been a 40% reduction in assembly hours. Besides these concrete operational results, less concrete, but nonetheless significant operational improvements were realized, including an explosion in cross-training, and an improvement in involvement and participation through an increase in suggestions for improvement. Additionally, there are now "working" cross-functional teams, with team members who are running meetings when supervisors are not present. These meetings have improved in efficiency. There has been a marked increase in "boundary management" activities- efforts to resolve conflicts within and between teams. Supervisors are being used to improve the productivity of the department through these efforts. Employees are working at higher levels of authority, and they are working on higher levels of problem-solving.

A common language for problem-solving has been adopted, and, as a result, consensus is reached more quickly. Peer pressure to improve and participate has been detected. Peer to peer coaching and feedback has been encouraged. There has been an increased focus throughout the department on important, but not urgent issues. All team members put their names on the machines they are building, indicating an improvement in quality and pride in workmanship, and teams can stop delivery of a machine if the quality is not up to team standards. Finally, there is an increased awareness of the "big picture." Team members are taking field trips to customer sites, and there is a greater awareness of other functions, because of the increased integration of support departments (e.g. purchasing, planning) into the production department.

Transformations. Since the conclusion of the final round of training and the implementation of the pay for knowledge system, a number of transformations have been undertaken in the production department to further the goal of increased employee involvement. Departments have been merged to facilitate more integration of functions. As a result of this transformation, support functions are better able to help teams. The number of supervisors has been reduced from 7 to 4. This is part of an effort to shift more responsibility to teams and reduce the direct involvement of supervisors in team activities. A new role- production trainer- has been introduced to help teams address some of the "teach vs. learn" conflicts cited above, as well as improve the quality of training, develop certification procedures for the pay for knowledge system, and improve workmanship. Workers are being encouraged to take on higher levels of authority. A Manufacturing Steering Committee has been established to coordinate the activities of teams. Information-sharing, which started early in the installation, is accelerating as layers of bureaucracy are stripped away. A Steering Committee meets monthly with department employees to share information.

In the context of these transformations, the production department continues to grapple with three transition issues. First, the issue of "How much empowerment do employees really have?" has been discussed extensively. Some employees have high expectations and act independently on these expectations. The Steering Committee and production manager continue to retain significant levels of authority. This disparity between expectations and reality is a source of conflict. Second, the pay for knowledge system needs to be supplemented with an incentive based on department performance to encourage teams to help other teams. Finally, barriers between the production department and other departments continue to prevent optimum coordination.

Final Thoughts

The value of this case study lies in two areas. First, the case validated several factors observed in previous high involvement installations. Walton's (1975, Winter) barriers to the successful diffusion of teams were directly observed. For example, the barrier of "lack of top management support" was validated through positive and negative examples. Because plant management did not declare empowerment as strategically important, there were many barriers to diffusing teams in other, non-production departments. Conversely, because the production manager had considerable authority within his department, and he did support the principles of the installation, the diffusion of the team structure from pilots to the whole department was successful. Bureaucratic barriers between functional departments were also directly observed. The model of team-building used in this case (see Figure 1) and the competencies for first-line leaders (Hardt, 1994) were validated by the experience of teams and their leaders. Training offered in this installation, and based on these models, was found beneficial by participants and management. Hackman and Oldham's work motivation factors were observed as being very active in this installation, and were good indicators of the motivational power of the work to pull teams together. The need for a champion to push the transition effort was also confirmed.

Second, the case illustrated the interactive effects of systems on each other as organization change is attempted. The empowering of employees through teams would not have been as successful as it was without a pay for knowledge system to give incentive to employees to work in this system. Technical system improvements were intrinsically linked with social system improvements. As the production department progressed through the change process, its structure was molded to make it more flow-oriented, in contrast to its former more functional orientation. Much of the department's success in reducing lead times and assembly hours can be attributed to this restructuring, as well as system improvements. At the same time, department restructuring

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gave teams a better chance to succeed. The dependence of both sides of the socio-technical equation on each other was manifested in the roles played by the two authors- one pushing the technical side, the other the social side. In this seesaw effort, mutual respect, openness, trust, and acceptance were indispensable in maintaining a balanced perspective on the question of what strategies would be most effective in facilitating the change process. When a client and outside change agent have such a balanced relationship, they can model a process of dialogue and consensus-building that can help the whole organization move through the phases of a high involvement installation.

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Perceptions of Self-directed Work Team Members: The Big Picture

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In an effort to understand some of the issues facing self-directed work teams from an internal, rather than external perspective, this study used observations and interviews to examine the impact of the SDWT experience on work team members at a mid-sized manufacturing organization. Using an inductive analysis of the interview data, four common themes emerged, providing a holistic picture of the concerns of two SDWTs. The study identified these themes as management support, reward processes, member status and cohesiveness. The paper concludes with a discussion of these themes.

As a result of increasing global competition, a growing number of U.S. organizations are using self-directed work teams as a means for increasing productivity by empowering workers. Although some companies have reportedly been quite successful in this venture, many more have faced innumerable obstacles in developing functional, autonomous teams. A number of research studies conducted during the past few years have examined such team variables as communication and heterogeneity (Pearce and Ravlin, 1987), reward systems (Magjuka and Baldwin, 1991), interpersonal competence (Gooley, 1993) and corporate culture (Beer, Eisenstat and Spector, 1990) to determine the conditions necessary for cultivating successful self-directed work teams (SDWT).

Rather than isolating specific factors, this study was designed to examine important team issues from the participants' point of view. In so doing, the researcher anticipated that team members, through their interpretations of experiences they shared on SDWTs, would create a picture, or a series of patterns emerging, from their perceptions of the development of team structure and processes. This study, then, addressed these patterns, which were categorized by the researcher as management support, reward processes, member status and cohesiveness.

Theoretical Framework

The foundation for this study was grounded in three related research areas. The first, systems theory, evolved from von Bertalanffy's System Theory (Passmore, 1988), Morgan's Open System Theory (1986) and Mink's Open Organizational Model (1979). Systems theory describes and analyzes the relationship between the nature of an organization and its environment, the individual and the work group. Open systems design models suggest that today's organization must create a work environment that allows workers to "experience, reflect, learn and grow" (Mink, Mink, Downes and Owen, 1994, p.14). Mink (1994) characterizes open organizations, as opposed to bureaucratic systems, as focused on creating commitment and achieving goals through collaboration. Obviously a natural outgrowth of the contemporary interest in open organizations, then, is the self-directed work team, where collaboration and participation are considered essential components of employee commitment.

The second area of research is the group of studies that examines team-based involvement structures. Hackman's (1986) findings suggest the complexity of studying work teams; among other conclusions, for example, determined that when organizations provided work teams with increased task interdependence, the potential grew for either greater success or failure. They concluded that there was no guarantee that teams would achieve their desired goals with the simple inclusion or exclusion of one or two variables. In fact, there were probably a number of additional factors, internal and external, influencing the team process.

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Most pertinent for this study was the research exploring the problems unique to self-directed work teams (Manz and Sims, Jr., 1987; Manz and Angle, 1986; Poza and Markus, 1980). Pearce and Ravlen (1987) traced its origin to England's Tavistock Institute, where socio-technical systems theory was pioneered and suggested that the current use of SDWTs in organizations serves as a "work-related form of self-determination" (p.752). They reviewed earlier studies which identified a variety of distinguishing characteristics and concluded that at least three preconditions for successful SDWTs existed. The first (1) was that the task be perceived by the team as a whole piece of work involving multiple skills. Secondly, (2) conditions within the organization had to be supportive toward SDWTs, and the third (3) stressed the importance of training in order that team members be prepared for the increased autonomy and responsibility that membership in SDWTs entailed (Pearce and Ravlen, 1987). These three pre-conditions strongly supported the findings of this study.

Research Questions

Initially, some of the research questions guiding this study were focused, somewhat, on individual member variables such as: "Are there personality traits or family experiences common among functional SDWT members? How do SDWT members handle conflict? How do SDWT members perceive the impact of cultural and ethnic diversity on the productivity of the team? Also, because the organization in which the SDWTs work employed a large number of Hispanics, one of the original questions was: "How do SDWT members perceive the impact of cultural and ethnic diversity on the productivity of the team?" However, after the observations and interviews were completed, some new questions emerged as more significant for the purposes of this study. These were: "How do SDWT members value power in their work lives? What are the members' understanding of how their team impacts on the department? How has the SDWT experience affected members' attitudes toward their jobs and the organization?"

Participants

This study took place in two of several semi-independent divisions of a mid-sized global organization that manufactures blood analysis instruments. The company's headquarters are located in South Florida, where a large percent of the work population is Hispanic. This organization's employees accurately reflect South Florida's ethnic population. The company's organizational structure is relatively flat which eased its moved from a traditional management-led culture to that of a team-based culture during the past few years. Many of the floor workers in the manufacturing units have participated in the team-member and team-leader training offered by the organization's trainers throughout the year; some managers have also attended the team-facilitator training in an effort to smooth the transition as they move away from their traditionally supervisory roles to that of coaches and advisors. Many managers, however, have not participated in either team leader or team facilitator training.

The two teams involved in the study were intact work units. Most of the team members were technicians; a few were engineers. The two teams performed different functions in the manufacturing process; therefore, there was some variation in team size and job titles between the two teams.

Methodology

Since this study was designed to examine the impact of the SDWT experience on team members, a qualitative study design was used. First, a review of relevant team literature was made to understand previous research, theory and current practice and to provide a through grounding in conceptualizing the problem.

Secondly, team facilitators identified two work teams to the researcher as either self-directed, or in the transitional process of becoming prepared to be self-directed. The organization adapted Orsburn, Moran, Musselwhite and Zenger's (1990) definition of a self-directed work team as a highly trained group of employees, from six to eighteen, fully responsible for turning out a well-defined segment of finished work.

It plans, sets priorities, organizes, coordinates with others, measures and takes corrective action--all once considered the exclusive province of supervisors and managers. It solves problems, schedules and assigns work.

Each of these teams worked in separate divisions of the organization. Members of both teams were primarily Hispanic in ethnic origin; one, however, reflected significantly more ethnic diversity than the other. The first one, a team of seven members, will be identified as "Gamma" for the purposes of this study. This team was perceived as relatively mature by management because it was meeting the goals it set within the established time line, with clear boundaries established between team members and other department workers. The second, "Kappa," was perceived as immature, or in a transitional stage. This team, comprised of sixteen members, among whom was the department's manager, was described as less able to set realistic goals and had relatively unclear boundaries between the team and other department workers.

Data Collection. Data collection procedures included observations of team meetings and interviews with the members, facilitators and one team trainer.

During the observation phase, the researcher attended several meetings of the Gamma and Kappa teams. She noticed two clear differences among the two teams: (1) The Gamma team, consisting of seven members, had nearly perfect attendance. On most occasions when a member would be absent, the facilitator explained that the employee had been assigned to another area of the division temporarily, as trouble-shooter. Since each of the members of this team had unique work backgrounds and skills, each of them was needed, occasionally, to assist on special projects. In contrast, the Kappa team meetings seldom had more than half of the team members present. In additional, only four of them sat around the conference table; the rest of them sat outside the small group, against the wall. During the three meetings observed by the researchers, none of the members sitting against the wall offered any comments. (2) During three of the seven Gamma team meetings observed, the facilitator/manager was invited to attend and did so. He said very little, participating only when asked for feedback after an issue had been resolved. The researcher noted, in contrast, that the manager of the Kappa team served as member, as well, and was one of the four team members around the conference table. This manager/member participated actively and appeared to this observer to be the leading decision maker on the team.

Interview Data. After completing the observations, the researcher scheduled and conducted the interviews. A standard open-ended interview format was used. From the experience with the interviews, an inductive analysis was used to identify common themes or categories of experience that existed among the Gamma and Kappa teams, and served to differentiate between the themes.

Data Analysis. The inductive analysis process uncovered four underlying themes which emerged from the observations and interviews with team members. These themes provided a snapshot, or holistic picture of the teams and their perceptions of the SDWT experience at the time of the study.

Results of the Interviews/Discussion of Themes

Management support. Members of the Gamma team reported feeling respected and trusted by management because the team was encouraged to make major decisions without management intervention. Several of the team members described how the team gradually shifted, over time, from a group of people waiting to be told what to do to one that knew it had to decide what to do without outside intervention. This process occurred, they suggested, not only because of the absence of any supervisor or boss at their team meetings but also because the managers were never in their offices when team members would try to solicit advice. The team felt much frustration and anxiety in the early days of the team's development but as the team members began to realize that their mistakes would not be punished and that team decision-making would be supported, they began to become bolder and riskier. As one of the Gamma team members reported: "You don't hear things like 'this isn't my job' anymore. Now the members think that all of it is their job." Nearly all of the members mentioned that they understood the "big picture' better due, in part, to their enhanced decision making roles. Statements such as "we're part of something now", "now we get to say what's going on" and "now we get to tell them what has to be changed" indicate the sense of pride and accomplishment this team has in its work. These shared perceptions also point to the sense of empowerment that apparently accompanies their understanding of the big picture. Several members reported feeling greater power and influence, words that are often used

to describe empowerment.

In contrast, Kappa team members reported that after being told they were empowered to make decisions, they were then reminded that the division policy to "consult" their manager before making any actual decision was still in effect. Recently, the Kappa team was scheduled to make a presentation for a manufacturing association's regional conference. In an effort to improve the team's enthusiasm for presenting, managers from the Gamma team's division offered to take the members out to lunch at a nearby hotel prior to the presentation. Kappa team's managers, however, refused to allow them the time necessary to accept this invitation. "This group has always been slapped down by management," one member said. As a result of this apparent lack of support, team members reported feeling that management had no trust in team effort. "So why try?" asked another member.

Cohesiveness: One clear difference between the two teams lay in the members' use of "we" or "I" in talking about their team experiences. In interviewing Gamma team members, the researcher noted that the pronoun "we" was always used. One interesting observation made by several of the Gamma team members was that they felt they "owned" and were made richer by the myriad of cultural and ethnic backgrounds represented among team members. Although the majority of the members were Hispanic; one was Arabic, another member was West Indian, and one was African-American. " We're a regular U.N. here," one member said proudly. Another, in discussing how they handle conflict, explained that "Because we come from different backgrounds, we don't expect to see the world the same way. So we have to listen real careful to understand each other. Now, I guess you could say we all do see the world the same way...at least at work." Several members of this team described their team as a "family." One member joked that "this family doesn't look very much alike but we probably think more alike than a normal family." All of the team members used phrases such as "sharing knowledge" and "support each other" and "getting along so that the team can get ahead."

The Kappa team members, all of whom were Hispanic, used "I" rather than "we" throughout the interviews. Due to the nature of their work, many of this team's members historically were required to troubleshoot on entire systems, rather than on sections or pieces of the system. Consequently, they had learned to take great pride in their individual accomplishments. It was obviously quite difficult, as several reported, to make the transition from feeling pride in their individual efforts to that taking collective pride in the team's success. In fact, two of the members said they believed that this division's norms clearly had served as barriers to developing cohesiveness in the team. Even with the recent encouragement and support of other division managers, Kappa team members report that a sense of "groupness" in this division is absent.

Member status. The Gamma team manager serves as facilitator and consultant to this team. He does not attend team meetings unless invited and is not part of the decision making process. Several members of the Gamma team pointed to the sense of accomplishment they felt at being able to solve tasks and reach the team's goal without the manager's input. "In fact," one pointed out proudly, "we really know more about the job than he does. Why shouldn't we decide how it's going to be done?" Related to the perceived sense of family reported by this team, members appears to think of their manager/facilitator as one of the family members--but as more of a brother or cousin than a parent.

On the Kappa team, the manager is also a member of the team, equal, theoretically, in status to the other members. Although he reported that he was "just another member," many of the other team members reported feeling pressured to support the manager's position on decisions that were made, regardless of their own views. One example is the decision to have a sixteen-member team, a number far exceeding that recommended by the organization's SDWT trainers and advisors. Two team members reported that they believed this decision was made solely by the manager, although the division was told it was a team decision. "But people feel so much pressure and friction when they know that he (the manager) wants a certain thing, that they can't be open like you want them to be open. And whenever you have to get a consensus, everybody will try to go at the beginning with what that guy {the manager} said. If you think he's going to say yes, then you say yes. And then everybody's saying yes. And then {laughter} democracy wins."

Reward System. When asked how to measure the "success" of their team, the Gamma team members pointed with pride to their participation in several regional manufacturing association presentations and to their recognition at award ceremonies. In addition, the team has received several bonuses for its efforts in developing a new procedure or process. Members pointed to the emphasis placed, in performance appraisals, on being a member of a successful team. Several members stated that they knew that being

a member of a productive team was considered vital to promotion and salary increase opportunities. In fact, one member said that the team's manager/facilitator was "on the fast track" primarily because he was able to move from the manager role to that of facilitator quickly and easily.

On the other hand, the Kappa team reported that they often felt they were competing with each other due, in part, to the departmental "daily work report" each member must submit which details his or her progress. Group members believe that only some of them can be rewarded; most of them, a couple member said, will be demoted or ignored. "Over there {Gamma team division} the whole department has a task and if the task gets done on time and right, then the whole department gets a bonus or a pat on the back or something. Here, everything is individual. If somebody else gets praised, then that means that I don't."

The Kappa team's daily work report is being phased out. Team members report that they know there are changes being made in the reward systems and that the current division goal statement specifies that team productivity be encouraged and rewarded. However, a few of the team members voiced concern over the ability of the team to change quickly enough to meet management' expectations. One member explained it this way: "They {the team members} remind me of a herd of zebras standing in a rainstorm after a drought. Even though they're surrounded by water they can't see it's raining. They have this idea that it's never gonna rain, so they'll die of thirst while they're standing in the water."

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Employee Perceptions of Employee and Organizational Values in a State Department of Corrections

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Values drive individual and organizational performance. This study described employee perceptions of employee and organizational values in a state department of corrections. In-depth interviews were conducted with 19 randomly selected correctional officers, probation and parole officers, managers, and support personnel. Respondents reported personal values emphasizing ethical behavior, family, and community, and service to others. Respondents reported organizational values as self-serving and unsupportive of employees. The resolution of organizational value in congruence may contribute to organizational productivity.

The values of an organization and of its members can help to explain what it is, how it functions, and why it functions the way it does. "Values constitute a philosophical position about what the organization thinks is important. In a way, the values can be considered the organizational personality, and this can set one institution apart from another" (Caffarella and O'Donnell, 1987, p.4). "Values are the bedrock of any corporate culture" (Deal and Kennedy, 1982, p.21).

Abbarno illustrated the importance of values when considering the roles of individuals and the moral character that is portrayed by in their community lives. He noted that "your identity as a moral character permeates your conduct and establishes expectations among members of the community" (1993, p. 311). The values of an organization affect its performance. "Ethical people can be brought down by serving in a bad organization, just as people with questionable ethical integrity can be uplifted, or at least held in check, by serving in a good one" (Brown, 1987, p. 68).

Taylor pointed out that most of our ideas about work and organization were born in the Age of the Machine and do not apply in the Age of the Information Network. He also noted that understanding the promises and challenges of work in today's economy requires radically new models and metaphors that go beyond the stale rallying cries of teamwork or empowerment (1994). The core values of the workers are more important indicators of performance and must be identified and addressed. For purposes of this study a value is defined as a belief or principle which affects human behavior.

Purpose

The purpose of this study was to describe employee perceptions of employee and organizational values in a state department of corrections.

Research Questions

1. How do the employees describe their personal values?
2. How do the employees describe the values of their organization?
3. How do the employees compare their personal values to the values of their organization?

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Methodology

The research method utilized in this project was the in-depth interview. A research proposal was submitted to and approved by the state director of corrections. Two open ended, probing questions were developed to address each of three research questions. The questions were evaluated by a recognized expert in qualitative research.

Three correctional facilities were visited to conduct the interviews and sense the facilities' organizational environments. A sample pool was selected randomly by drawing four numbers from a hat. These numbers, four, seven, 14 and 19, were fed through the department's computer which carried an alpha list of employees. The selected individuals were written letters by a district supervisor who invited their voluntary participation. The selection and acceptance process took approximately three weeks because 18 probation and parole officers declined to be interviewed. Finally, 19 employees agreed to participate and all were interviewed.

The respondents were randomly selected from all of the major job categories in the department. There were four correctional officers, seven probation and parole officers, four members of management and four support personnel. Eight respondents were between the ages of 25 and 35, nine were between the ages of 36 and 45, and two were more than 45 years old. There were eight males and 11 females. There were ten whites and nine blacks. Thirteen were married and six were not. Sixteen were parents and three were not. Twelve were members of clubs or organizations and seven were not. Fifteen attended religious services and four did not.

Approximately two hours were spent with each of the 19 employees. The questions were read from the interview schedules. Notes were taken during the interviews in the event that the tape recorder failed, as it did on several occasions. Interviewees were given the opportunity to ask questions and share feelings regarding their general impressions about, or problems, with the study. Consent forms were reviewed and the nature of the study was presented.

Experienced employees tended to be mistrustful of the tape recorders and of personal questions about their work lives or personal lives. Several wondered if this process was a management spying effort. Even a district supervisor said that this study was feared to be a type of executive fact finding project for "digging up dirt" on certain employees.

In corrections there are a variety of roles, each with different responsibilities. With the great variations in how they deal with offenders, and the different approaches used to gain compliance from offenders, it became useful to understand the environments of the facilities. Differences in levels of cooperation and teamwork varied from facility to facility. The most tense and uncomfortable locations were the probation and parole offices. Employees at the incarcerating facilities seemed to be less adversarial with management, and happier and more relaxed overall. Strange as it may seem, stress and frustration seemed less noticeable inside prison walls than outside in the community supervision locations.

Prisons are more structured and less tolerant of rule violations. However, as a whole they are more congenial with regard to outsiders. Probation and parole officers seem to isolate themselves in their offices or spend their time in the "field." According to Smiley, Diana, Jasmine and Cliff, more than half of the probation officers and other staff members were taking Prozac or other mood elevators for depression. (Probation and parole officers in this agency are required to carry firearms while on duty.) In addition, many employees were under psychiatric care.

Twelve weeks were needed to select participants and schedule and conduct interviews, as well as to analyze the data and report the findings. By using the in-depth qualitative methodology, it was possible to see subtle forms of body language and to read environmental issues like peer pressure placed on the interviewees not to participate. Often, probation officers would make remarks to discourage participation, such as, " This will end up in your jacket (i.e., personnel file), just you wait and see," or, "Remember, there is no such thing as confidentiality in the Department of Corrections (DOC)". These comments implied a lack of trust of anyone who appeared to be from management. The in-depth interview also provided the opportunity to explore the style and personality types of the respondents.

Other qualitative methods were considered. Participant observation would not have been appropriate for this study because perceptions cannot be interpreted from observations alone. Neither content analysis nor an historical approach were used because one-to-one contact with respondents was considered essential. Gaining an emic perspective was important in order to be able to sort out the truth

from the socially acceptable practice. Visual sociological methods were unavailable because regulations affecting offender confidentiality restricted participation in employee-offender interactions.

Presentation and Analysis of Data

The first research question was, "How do the employees describe their personal values?" The responses in descending order of frequency were family, honesty/loyalty, spirituality, responsibility, career, respect, happiness, integrity, caring for and helping others, openness, discipline, financial security, and retaining the middle-class American way of life, (See Table 1).

Table 1 **Employee Personal Values**

Family	Honesty/Loyalty	Spirituality	Responsibility	Career	Respect	Happiness	Integrity	Caring for Others	Helping Others	Openness	Discipline	Security	Retain Way of Life
17	16	7	6	6	6	6	5	5	5	3	3	3	3

Henry said that "family is most important and I would sacrifice the job if necessary for family," and that "providing for my family is important and that is why I am motivated to keep my job." Honesty/Loyalty was the second most frequently reported value by employees. Sally said that "honesty is number one," and John agreed that "the most important values are honesty and loyalty, in that order." Henry said, "God is my number one priority with my family second and job third," which Ester agreed when she said that " God is most important and controls my life and I have a strong relationship with Him". Bambi commented about responsibility. "I think we are much more honest and responsible, but we don't care about money like those profit employees do". Raymond stated, "I give most of my all to the job". Career is important to Patrick, who said, "I come to work because my parents said to do the best job, regardless of what it is". Jane said, "I also value peace, my family, and just smelling the roses. It is important to me to be happy". To John, "honesty and integrity are the number one thing," while Ester used the following to describe the importance of integrity as a value ."I do not need supervision, as I will do my job because I believe I have a good work ethic." Henry said, "Before I go to work I pray that there will be someone who I can help." Many employees work in the DOC because they want to help others. Jane said, "I like to try to help people and I feel I am making a difference where I am at." Henry stated, "I get the ultimate rush when I am in a position to help others." Bambi said, "All of my life consists of taking care of people". Barry said, "It is also important to be thought of well by other people".

The second research question was, "How do the employees describe the values of their organization?" (See Table 2).

Table 2 **Employee Perceived Organizational Values**

Protect Public	Public Image	Pander to Politicians	Self Protection	Dishonesty	Ignore the Powerless	Follow the Law	Rehabilitate Offenders	Rigidity	Benefit Management	Cultivated Confusion	Control Others
14	11	9	9	8	8	5	5	5	5	5	4

Most employees perceived the organizational values to be dishonest and self promoting. Characteristics of the organizational values included: dishonesty, protecting personal interests, preoccupation with public image, pandering to politicians, protecting the public, ignoring the powerless, preferential treatment for managers, following the law, rigidity, offender rehabilitation, cultivating confusion and controlling others. In terms of dishonesty, "personally, there are many times when they won't come right out and tell you to lie, but obviously that is what's expected" (Diana). Ester noted that the "department doesn't have honesty, or importance for family". "When line officers have family problems they get little support, and depending on the supervisor may be stressed further by refusing to cooperate with schedules, limit leave, possible audit of your cases while you are gone, or schedule an audit the first few days you return, something of that nature" (Diana). "If you make the wrong people mad, then you'll find yourself working for the boss from hell" (Diana).

The agency is seen as one in which "work becomes more important than the person", according to Priscilla. As Diana states, "Upper management's family is quite important. However, as far as line staff and their issues, they rank far down the list of priorities." Other similar comments were made like, "Independent thinking is not supported or encouraged at all" (Lucy). William stated, "I find my position most difficult, especially when I have to sell something to the staff that I don't believe in." John was concerned about promotion practices when he stipulated that "it appears promotions are given to individuals because of race or sex because of the department's need to cover their backside rather than pick the best individual for the job." Sometimes it is important for individuals to be understood. However, that is not always done, or so says Henry. "Understanding is not as important to management" (Cliff).

Sally pointed out that the "DOC puts on a rosy picture for the public about how we are dealing with offenders". Smiley says that the DOC wants the employee to "put on a good show for the public and the politicians." Nancy was even more clear when she said, "I have learned very well that the number one most valuable and important concern is that of the media's view of our work competence. This organization lives to cover their butt with the public." "The upper management is more concerned with appearances than what really gets done sometimes. They worry about what the public and the politicians think," said Suzanne.

Nancy noted, "When the organization stresses the mission statement 'to protect the public, employees and the offender', most employees chuckle. The only true protection going on around here is that of covering ass." Looking good in public is the "basic value of survival which is accomplished by keeping media off the agency back" (John). Pleasing politicians is perceived as one of the values of the organization in a comment made by Diana and echoed by Smiley and Cliff. "I think this job is highly political." To Cliff, the DOC "manipulates the community by fear." Ignoring the powerless is a concern of the employees. "The job is difficult because administration doesn't support the front line" (Patrick).

Many actions benefit management. "Training is provided to some more than others", and "they have a select group which they choose to protect or not protect which will enhance their career" (Diana). "'Fulfill the law' is the number one value of the organization", according to Ester. Cliff believed that fulfillment of the law referred to " a neighborhood of individuals that are not threatening to others".

Rehabilitation was a value expressed by Suzanne. "I would hope that rehabilitating the inmates is important." Rigidity was expressed in a statement by William about his supervisor. "She will give feedback but will not allow for disagreement with her". Management is seen as more concerned about taking care of themselves than the agency. "They don't care about quality. They make us use stationery that the Governor's name is misspelled on because we have reams left over" (Lucy). The exercise of power and control over others was highlighted with statements like; "She has forced more out of me than many supervisors. Failure could get you a hit by the bat" (William). "The DOC likes power" (Henry). Regarding community safety, Henry said, "It is important for the public-sector employees and employers to provide security for the community", and "Values of the public sector are more for protection of society." Referring to the DOC, John said that "it is a service driven agency to try to impact society and change it."

An environment of cultivated confusion was implied by several statements. Eighty percent of the respondents saw the organizational structure set up to elicit a "Them versus Us Attitude." William contended that the DOC "keeps the staff in kind of an uproar." And contributing to that effort was the perception that "values change from director to director, legislature to legislature, and Governor to Governor" (William). The DOC has "transitory values" (Lucy).

The third research question was, "How do the employees compare their personal values to the values of the organization?" (See Table 3).

Table 3 Perceived Congruence of Employee and Organizational Values

Share Values	Do Not Share Values	Unsure
4	14	1

Respondents were asked how their own values compared to the values of their organization. Approximately three-quarters of the employees communicated organizational values which were substantially different from their own. Twenty percent identified values which were relatively congruent with those of the department. Jennifer said, "My values are more similar than dissimilar".The responses further indicated that the employees saw themselves differently from the organization in that they that felt their value systems were substantially different.

According to Patrick, "The administration is out of control and there are always vindictive measures if you stand up for your own principles". " My skills have been eroded and I am depressed", said Cliff. Smiley said that it is "almost depressing to have to go to work." The organizational values could be summarized as power and control, maintaining the status quo, projecting a favorable appearance, not caring about the average employee, and devaluing input from the rank and file.

The conflict in values could be seen in Diana's remark, "I have to almost leave my personal values at home because there is so much disparity between my personal values and the departmental values". Lucy said that she was "a loyal employee to the organization but find myself at great odds with the agency." John stated that his values and the department's values were "not very compatible a lot of times." William felt that the top managers "don't get the input from all of the people that they need to, especially the ones that are affected by the decision". Sally felt that there was a major conflict when she

tried to do her job and could not because she saw the "conflict between DOC and her values in removing offenders from the community." Cliff felt that there were definite "conflicts of interests," that the goal of management was to "be deceptive at all times." Jasmine felt that "my values are better than the organization's because I am caring toward the little people." There were substantial indicators of conflict between employee values and their perceptions of the organizational values. To suggest that this conflict was totally the fault of the organization would understate the complexity of the situation. However, the respondents felt that the primary responsibility for the incongruence of values rested within the agency.

Discussion

The personal values of the interviewed employees can be placed into three groups by frequency. Nearly all (16 and 17 out of 19) identified family and honesty and loyalty. Between five and seven people mentioned each of the values of spirituality, responsibility, respect, happiness, career, integrity, caring for and helping others. Three individuals identified discipline, financial security, and retaining traditional American values and opportunities.

These values are heavily oriented toward ethical behavior, the building of community, and service to others. The emphasis upon self oriented issues like career and financial security was relatively low.

The values which the respondents perceived to be held by the organization were, by contrast, primarily self serving and unsupportive of employees. Only "protect the public," "follow the law," and "rehabilitation of the offender" did not appear to be self-serving. "Protect the public" constitutes the first three words of the department's mission statement and might have been expected to have been identified by all. And "rehabilitate the offender," identified by only one fourth of the employees, is the public's general perception of a primary purpose of the department.

An organization with incongruent values can respond in various ways. It can ignore the incongruence or pretend that it does not exist. It can confront the problem directly and attempt to modify the values of the employees and/or of the organization in order to bring them into closer alignment. Or, it can remove and replace either the employees or the organization's key decision makers with persons whose values are more compatible with the values of the other entity.

Unfortunately, many organizations avoid dealing directly with value incongruence by distracting themselves with organizational re-engineering, team management, total quality management and other such "deck chair rearrangement" training programs which shuffle titles, duties, and/or activities. They wonder why their programs do not transform the organizations. The answer may be that they do not work because they fail to address the basic values and belief systems which drive organizations and workers to do the things they do much more forcefully than activity or role based programs can modify.

The incongruence of values may be one of the most overlooked performance related problems in organizations today.

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Management Development Simulations: Effective or Not?

Jill R. Hough
Alternative Environments

Simulations and games have become popular instructional methodologies. This paper reviews the differences between these methodologies and presents a classification scheme consisting of total enterprise simulations, functional enterprise simulations, microworlds, and behavioral simulations. The classification scheme is then used to organize the research related to the effectiveness of management education and management training simulations.

In the forty years since the first business game was created (Lane, 1995), simulations and games have become widely used as instructional strategies. In the first major attempt to determine the use of business games, Faria (1987) surveyed corporate training and development managers and found that over 55% of the respondents used some form of simulation game or exercise in management training. Several years later, similar results were obtained by Wagner who found that 58% of the training directors that responded to his survey used some type of indoor game or simulation (cited in Wiesendanger, 1993). More recently *Training* magazine's 1995 Industry Report indicated that 63% of the organizations surveyed used games and/or simulations as an instructional method.

Given the wide use of games and simulations, Kirk surveyed practitioners to learn "why" and "how" these strategies are implemented in training programs (cited in Morris, 1995). The survey results showed that 17% of training time was spent on games or simulations and identified a broad range of purposes for using games.

What is Simulation?

The term "simulation" does not have universal meaning. While some authors have made a distinction between terms such as "simulation," "game," "experiential exercise," "role play," "gaming simulation," "simulators," etc. (Keiser & Seeler, 1987; Klietsch, Wiegman, & Powell, 1969; Lane, 1995; McAteer, 1991; Thornton & Cleveland, 1990), others have used the terms "game" and "simulation" interchangeably (e.g., Faria, 1987; Hsu, 1989; Jacobs & Baum, 1987; Raia, 1966; Wolfe, 1976b).

Games have been defined as follows:

- "A game is a structured activity in which two or more participants compete within constraints of rules to achieve an objective" (Keiser & Seeler, 1987, p. 460).
- "Learning games are multi-person, competitive, interactive, learning units" (Klietsch et al., 1969, p. 4).
- "A 'game' is then defined as a specified sequence of activities designed to convey benefits to the players" (Lane, 1995, p. 606).
- "A physical or mental competition conducted according to rules with the participants in direct opposition to each other" (Webster's New Collegiate Dictionary, 1979, p. 467).

Each of these definitions either explicitly, or implicitly, suggests that games have: (a) structure or rules, (b) active participation, and (c) goals or objectives. In addition, all but Lane's definition includes some form of competition.

Definitions of the term "simulation" found in the literature include:

- "A simulation is an operational model, using selected components, of a real or hypothetical process, mechanism, or system" (Keiser & Seeler, 1987, p. 460).
- "A simulated experiential environment is a simplified and contrived situation that contains enough verisimilitude, or illusion of reality, to induce real world-like responses by those participating in the exercise" (Keys & Wolfe, 1990, p. 308).

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- "A 'simulation' is a specified sequence of verisimilitudinous activities designed to convey lessons to the participants on the properties of a real-world situation" (Lane, 1995, p. 606).
- "The imitative representation of the functioning of one system or process by means of the functioning of another" (Webster's New Collegiate Dictionary, 1979, p. 1074).

By defining simulation as a "model" or "representation of a system," these definitions, like the definitions of games, imply structure and goals. And when used in a training context, participation is also implied. However, simulations are inherently more verisimilitudinous, or realistic, than games. Lane (1995) provided a practical example: In the Island Escape game, players must imagine that they are shipwrecked together on a volcanic island. With limited time and resources for evacuation, they must quickly decide which surrounding island offers the best opportunity for long-term survival. Although Lane conceded that general lessons can be learned from this game, he maintained that it did not have the verisimilitude of a simulation.

Based on these definitions, many "business games" referred to in the literature are actually business simulations (Lane, 1995). However, the training and development literature does contain a mixture of games and simulations (e.g., "Industry Report", 1995; Jacobs & Baum, 1987; Morris, 1995). Therefore, when reviewing research it is imperative that the terminology used be critically evaluated. In this paper, simulation is defined as an activity that (a) is based on a verisimilitudinous model or system representation and (b) includes participant interaction with the model and/or other participants. The term game will be used only when required by a direct quote.

Classifying Management Simulations

Simulations take many different forms as do their classification schemes. Keys and Wolfe (1990) identified five types of simulated experiences: (a) experiential exercises, (b) total enterprise, (c) in-basket simulation, (d) complex behavioral simulations, and (e) functional business games. McAteer (1991) described simulations as either open or closed with "structure" and "format" used as more detailed descriptors. Although Lane (1995) did not "label" the types of simulations, his article included an appendix which described five "very different types of management simulations" (p. 604). Klietsch's et al. (1969) classification scheme focused on whether the simulation was manual, mixed, or computer based. Biggs (1987) used only two classifications for simulations: general management and functional. Amount of complexity was used by Thornton & Cleveland (1990) in classifying simulations into the broad categories of (a) one-on-one interview simulations, (b) leaderless group discussion, (c) in-basket techniques, (d) complex decision-making simulations, and (e) large-scale behavioral simulations.

Common among these classification schemes is the absence of: (a) "microworlds" (sometimes referred to as "management flight simulators") advocated by MIT researchers (e.g., Bakken, Gould, & Kim, 1992; Graham, Morecroft, Senge, & Sterman, 1992) and (b) an illustration of the relationship between the different types of simulation.

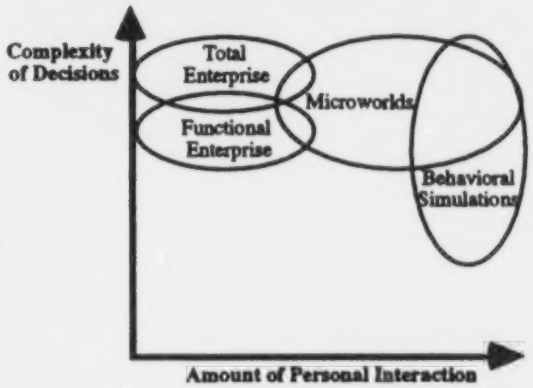
Synthesizing the definition of simulation, the classifications previously cited and the missing elements, results in a classification scheme for categorizing simulations into one of four basic types: (a) total enterprise, (b) functional enterprise, (c) microworlds, and (d) behavioral simulations. Definitions adopted from the literature for each type are as follows:

> A total enterprise game is one which includes decisions in most of the main functions of business: marketing, production, finance, and personnel. Such games require integration of the various functional areas. In addition, total enterprise games incorporate environmental factors, such as general economic conditions and interest rates as important components of the learning experience. . . .
>
> A functional [enterprise] business game is one which focuses on one of the major business functions of marketing, production and operations, personnel and human resources, or accounting and finance. While decisions in each of the areas may be required, the focus is on only one area and there are many decisions which must be integrated within the functional area (Keys & Biggs, 1990, p. 49, 58).

Microworlds are "microcosms of real business settings where teams of managers together learn by conducting experiments that are difficult or impossible to conduct in real business" (Senge, 1990, p. 299). Behavioral simulations "attempt to reproduce individual and collective behaviors that would normally be observed in a real-world environment" (Dutton & Stumpf, 1991, p. 151).

Figure 1 illustrates the relationship between the four types using complexity and interaction as descriptors. Increased complexity is characterized by an increasing number of decisions and/or greater breadth of decisions. Increased personal interaction is characterized by an increasing emphasis on the "process" of decision-making or managing, i.e. how participants interact with one another and/or the model.

Figure 1. Types of Management Simulation as a Function of Complexity and Personal Interaction



The figure illustrates several observations gleaned from the definitions and simulation literature. First, as models of reality, complexity is inherent in simulations. Second, functional enterprise simulations are generally less complex than total enterprise simulations. However, it is possible that a simplistic total enterprise simulation could be less complex than a detailed functional enterprise simulation. Third, although total and functional enterprise simulations may require participants to interact with team mates in making business decisions, the models do not emphasize personal relationships and developing such relationships are not part of the learning objectives. Fourth, behavioral simulations by definition have a high level of personal interaction but may vary in complexity. Finally, microworlds are generally based on representations of actual complex systems and emphasize mapping, challenging, and improving the underlying mental models. As such, they require both high levels of complexity and high levels of personal interaction.

Research on the Effectiveness of Simulations in Management Development

Despite what Lane (1995) called a "resurgence" of interest in management simulations, he concluded that there is "too much belief and too little evidence" (p. 617) related to knowledge acquisition and transference to the workplace. Although Keys and Wolfe (1990) acknowledged the need for research continuity as well as "fresh new approaches," they concluded that "management games have been found to be generally effective and to possess internal validity in the strategic management type course" (p. 316). These comments highlight the lack of agreement on simulation effectiveness.

Furthermore, the conclusion drawn by Keys and Wolfe (1990) identified one pitfall of simulation research as it relates to Human Resource Development–much of the research on simulation effectiveness has been conducted in the educational context of college classrooms. Hall (1995) identified several differences between the academic setting and the setting of an executive short course including: logistics, complexity, duration, knowledge, experience, maturity, objectives, and power. Based on these differences, he argued that simulations designed for the academic setting are inappropriate for executive training.

Yet, this does not mean that simulation research conducted in the academic setting is not applicable to management development. Actually, college-level research is part of the "management education" element of Wexley & Baldwin's (1986) three-part management

development framework that includes: (a) management education, (b) management training, and (c) on-the-job experiences.

Wolfe and Roberts (1986) noted that both short- and long-term performance evaluations are important to educators. Short-term evaluations typically focus on learning and may question (a) whether learning has occurred or (b) how learning from one strategy compares to learning using another strategy. On the other hand, on-the-job performance is the focus of long-term evaluations.

To summarize: (a) simulations can take on different forms, (b) management development consists of management education and management training, and (c) it is important to consider both the short-term and long-term effectiveness of simulations. Thus, the next section of this paper summarizes the research as it relates to management education and management training according to the classification scheme presented earlier.

Management Education. "There are lamentably few rigorously controlled evaluations of their [simulations'] teaching ability. Many purported evaluations consist of faculty or student post hoc reactions" (Wolfe & Guth, 1975, p. 350). However, rigorous research on the use of simulations for management education can be found in the literature.

In a three-way comparison, Raia (1966) conducted a study comparing case studies, simple simulations, and complex simulations. He concluded that simulations enhanced knowledge, interest, and motivation when compared to case studies. He also concluded that simulation complexity did not significantly affect learning. In another study, Wolfe and Guth (1975) found simulations and cases were equal in teaching factual knowledge, but simulations were superior at teaching conceptual knowledge. In a similar study Keys and Wolfe (1990) summarized the research on comparative learning in a table that showed eight studies with positive findings and two studies with negative findings. Their discussion of the studies with negative findings indicated that these studies may have inherently favored the case method.

Other studies have focused strictly on the learning contribution from a simulation. For example, Whiteley and Faria (1989) used a functional enterprise simulation to conclude that quantitative skills, but not applied and theoretical skills, are enhanced by participation in a simulation. Washbush & Gosenpud (1993, 1994) concluded that although simulation performance did not predict learning, participants learned what was intended.

But how do simulations facilitate learning? Research supports three distinct theories. Wolfe (1976b) cited three studies that document interpersonal experiences as the prime source of learning. One of the studies cited was Dill and Doppelt who reported "students remember what they learn from interactions with other people more vividly than they remember what they learn from working on the analytic tasks in the game" (p. 53). The same study, along with another by Strother et al. (cited in Wolfe, 1976b), also concluded that simulations "fostered an awareness of problems but not the technical solution of them" (p. 52). On the other hand, Lane (1995) noted that some researchers view simulation building as more effective than actually participating in the activity.

In examining the question of whether participation in a simulation affects future performance, Wolfe and Roberts (1986) cited six studies which compared student simulation participants to successful businesspersons. When considered alongside studies that correlated a manager's simulation performance with his/her real-world business performance, the authors concluded that long-term effectiveness was supported in a comparative sense (Wolfe & Roberts, 1986). However, longitudinal studies comparing simulation performance to long-term career performance have shown inconsistent results. A study by Norris and Snyder (cited by Wolfe & Roberts, 1986) showed no correlation between simulation performance and career success after five years as measured by promotions, proximity to the highest position within the organization, and percentage of salary increase. Wolfe and Roberts criticized the methodology on three levels. First, subsequent studies showed that the simulation used by Norris and Snyder was ineffective at producing learning results. Second, career performance was measured on an individual basis while simulation performance was measured on a team basis. Finally, the choice of indices for both simulation performance and career success was questioned. A five-year longitudinal study was conducted by Wolfe and Roberts (1986) using 142 undergraduate business seniors. By the authors' own admission "the study's results can provide grist for those who wish to either believe or disbelieve business gaming's external validity" (p. 54). But a follow-up study by Wolfe and Roberts (1993), showed that an individual's peer-assessed contribution was correlated to income level, salary increases, and number of promotions five years after graduation.

Many other rigorous studies on simulation effectiveness have been reported in the literature. In 1973 Greenlaw and Wyman reviewed 22 studies. In 1985 Wolfe published a ten-year update that reviewed 39 additional studies. Table 1 summarizes the results from these two reviews. In addition, several studies published since the Wolfe article are included. Hsu's (1989) summary table of the Greenlaw and Wyman and Wolfe reviews was used to assist in developing the table.

Table 1. Summary of Research Results on the use of Simulations in Management Education

	Short-term Effectiveness		Long-term Effectiveness	
	Positive	Inconclusive or Negative	Positive	Inconclusive or Negative
Total Enterprise Simulations	9 studies cited by Greenlaw & Wyman, 1973 14 studies cited by Wolfe, 1985 Wheatley, Hornaday, & Hunt, 1988 (cited in Keys & Wolfe, 1990) Washbush & Gosenpud, 1993, 1994	9 studies cited by Greenlaw & Wyman, 1973 8 studies cited by Wolfe, 1985	1 study cited by Wolfe, 1985 Wolfe & Roberts, 1993	3 studies cited by Wolfe, 1985 Wolfe & Roberts, 1986
Functional Enterprise Simulations	2 studies cited by Greenlaw & Wyman, 1973 5 studies cited by Wolfe, 1985 Whiteley & Faria, 1989	6 studies cited by Greenlaw & Wyman, 1973 11 studies cited by Wolfe, 1985 Whiteley & Faria, 1989		
Behavioral Simulations				
Microworld Simulations	Bakken, Gould, & Kim, 1992			
Simulation Type Unspecified	Gosenpud & Washbush, 1993		7 studies cited by Wolfe & Roberts, 1986	

From the table one can see that most of the research, as it relates to management education, has been conducted using total or functional enterprise simulations. This finding could reflect the greater emphasis on factual and conceptual management learning in the education environment and less emphasis on personal interactions or the "process" of decision-making. An enterprise simulation "concentrates and emphasizes the policy-making activities, while it simultaneously distills out much of the politics, physical and mental exhaustion, and trivia of organizational life" (Wolfe, 1976a).

Management Training. In comparison to management education, relatively little rigorous research has been conducted on the effectiveness of simulations for management training. As noted by Thornton and Cleveland (1990) it has been through practical applications that many simulations have demonstrated their effectiveness.

As shown in Table 2, support for the short-term effectiveness of simulations has been demonstrated by at least five separate studies. Although not specifically designed to study learning

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in management training, a comparative study conducted by Wolfe (1976a) showed that both college students and practicing managers experienced significant increases in administrative skill and environmental cognizance. In a true management training environment with public utility executives, data gathered by Over (1993) indicated that (a) participants valued the experience and (b) learning did occur.

Table 2. Summary of Research Results on the use of Simulations in Management Training

	Short-term Effectiveness		Long-term Effectiveness	
	Positive	Inconclusive or Negative	Positive	Inconclusive or Negative
Total Enterprise Simulations	Wolfe, 1976 Over, 1993			
Functional Enterprise Simulations				
Behavioral Simulations	Van Velsor, Ruderman & Phillips, 1989			
Microworld Simulations	Bakken, Gould, & Kim, 1992 Drew & Davidson, 1993	Bakken, Gould, & Kim, 1992		

The first behavioral simulation with an organizational context and the ability to replicate management behavior was Looking Glass, Inc. (McCall & Lombardo, 1978). Although initially developed as a research instrument, Looking Glass designers soon recognized the simulation's potential as a training tool. However, limited research related to the effectiveness as a training strategy is found in the literature. In one study, Van Velsor, Ruderman, and Phillips (1989) content-analyzed the "lessons learned" by 72 participants and compared the results to Luthans' model of managerial activities. They found that each of Luthans' activities was represented in Looking Glass lessons.

In research on the use of microworld simulations, Drew and Davidson (1993) reported that participation in a telecommunications industry simulation increased participants understanding of the overall industry and the challenges facing the participant's organization, and provided an appreciation for functional and individual interfaces. Other studies reported by Bakken et al. (1992) focused on learning. In one instance, managers from a computer manufacturer participated in a seminar that included an introduction to systems thinking, participation in the People Express management flight simulator, and a session on advanced causal-loop diagramming. Based on responses to a learning instrument, researchers concluded that participants could respond appropriately to situations containing a structure similar to People Express; but, little learning transfer to dissimilar situations was observed. In another study, which included participation in two simulations with similar underlying structures, learning was confirmed based on improved performance from the first to the second simulation.

Graham et al. (1992) advocated the need for methods of measuring simulation effectiveness followed by sound research on the effectiveness of management flight simulators and microworlds. However, from Table 2 it is clear that research on the use of all types of simulations for the purpose of management training is still desperately needed.

Continuing Research

In "The Role of Management Games and Simulations in Education and Research" Keys and Wolfe (1990) encouraged additional research on the use of simulations in an educational context. They suggested this research can be categorized into three broad areas: inputs, process, and outputs.

Using their framework, opportunities for additional research within the broader context of management development will be presented.

"Input" research could include the study of constructing simulations and selecting teams. Questions involving construction include: What simulation characteristics must be present to ensure learning? How does simulation complexity affect learning? When developing microworlds, who should be involved (i.e., does learning improve when participants assist in model development)? Which types of simulations are best for different classifications of learning objectives? Are there learning differences between computer-based simulations and manual simulations? How much information should be provided to players? On the other hand, the amount of learning may be more a function of the students than of the simulations. Previous studies (cited in Keys & Wolfe, 1990) have shown little correlation between participant aptitude and simulation performance while showing more significant correlation between measures of achievement and performance. However, these studies were conducted in a higher education context. What are the correlations when participants are from business and industry? What is the most effective team size? How can team performance be correlated to individual performance?

Simulation administration is the principal concern in "process" research. "Comprehensiveness of the research in this area is rather spotty. This is unfortunate, because second to the quality of the simulation itself, the administration of a game is probably the most important factor associated with a game's success" (Keys & Wolfe, 1990, p. 314). Questions include: What effects do instructor reinforcements have on performance? What effect do rewards have? What is the optimum elapsed time for a simulation? How does team cohesion affect performance? What effects do "supplemental" materials have on learning? What effect does pre-instruction have on performance?

Most of the "output" research has revolved around simulation performance. However, for HRD the most important questions center on performance in the workplace. For example: Is there a relationship between simulation performance and learning? Is there a transfer from the simulation environment to the workplace? Does model building produce better results than participation only? Do different simulation types produce different results?

With such widespread use of games and simulations in training and development, it is important that these strategies be clearly defined and rigorously researched. While many studies have been conducted on the effectiveness of simulations in the management education context, studies showing long-term effectiveness are clearly needed for both management training and management education. Also more research on "how" simulations create learning is warranted. Until such research is conducted, the effectiveness of simulation as a management development strategy remains an unanswered question. Thus, practitioners should exercise caution in using simulations as an instructional strategy.

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Job Analysis Validity & Workability

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Job information is the basic data used by industry, governmental and private agencies, and employee organizations for many human resource programs (Hodgson, 1972). The nature of the required job information varies in type and approach according to program needs. Regardless of the ultimate use for which it is intended, however, the data must be complete, fair, representative, and valid (Sage & Rocco, 1995). Griggs v. Duke (1971) even established the legal need for using job analysis processes that involve employee and job applicant related decisions. The job analysis commonly serves as the basis for the instructional content of a training program. The analysis may also be used to tailor a job by adding certain duties and subtracting others from particular segments of a job description. Findings relating to key JA purposes and concerns for six selected JA methods are presented in this paper.

Background and Purpose

Occupational research, commonly refered to as Job Analysis (JA), includes assessment tools, associated activities, and work behaviors. Levine (1983) emphasized that the key link between workers and the organization was the job. Today, the job is still a viable link, however, as the job changes, so must the job description. The JA serves an important role in maintaining a valid job description that is truly representative of the job. As technology makes its debut in organizations, tasks performed in given jobs change. The introduction of new technology and processes, different market needs of our global society, and different employee knowledge, skills and abilities (KSAs) needed by employers drive the need for frequent job analyses.

For instance, tasks like preparing draft documents, using electronic spreadsheets, sending electronic messages and accessing electronic data bases frequently appear as part of the information age worker's jobs. Secretaries no longer simply take dictation and type a given number of documents each day between phone calls. Many secretaries, as an example, perform fewer word-processing tasks and more desktop publishing and graphics-based tasks. As a result, they interact with many more individuals and must become more aware of human relations, interpersonal skills, conflict management, teamwork, communications, and like concerns. The KSAs needed to perform these job tasks, at the desired level of proficiency, are quite different than the KSAs needed five years ago (Kirby, 1994). Just how different depends on what new technologies and tasks are being incorporated into the specific job.

To identify the impact of these technological changes contributing to job analysis validity and workability, an assessment of 'what the worker does' needs to be conducted. The results of this assessment determines if the worker's current job description, tasks performed, tools and equipment used and knowledge and skills required accurately reflect what the worker is doing. The purpose of this study was to examine internal characteristics of six JA methods/techniques that include Position Analysis Questionnaire, Critical Incident Technique, Comprehensive Occupational Data Analysis Program (TI/CODAP and atCODAP), Functional Job Analysis and DACUM. These methods/techniques are built on somewhat different theoretical foundations and therefore, the study of their effectiveness in relative terms is difficult. The Position Analysis Questionnaire (PAQ) is a worker-oriented job analysis system and characterizes the human behaviors, involved in jobs, that can be observed and described in quantitative terms used to rate job dimensions. The Critical Incident Technique (CIT) provides a

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worker-oriented approach to developing worker specifications from firsthand, behavioral data, job dimension by job dimension (Flanagan, 1954). Comprehensive Occupational Data Analysis Program (CODAP) consists of a series of interactive computer programs for analyzing, organizing, and reporting on data gathered from various inventories that focus on task performance (Ghorpade, 1988). TI/CODAP uses mark-sensed documents in conjunction with mainframe computer programs and atCODAP is accomplished using personal computers to generate interactive MS/DOS survey instruments. Functional Job Analysis is a job-oriented system based on a systematically articulated theory of jobs and people (Fine & Wiley, 1971); it uses people, data, and things and focuses on task performance needs. DACUM, an acronym for Developing A Curriculum, is an occupational analysis method performed by a panel of expert workers in the occupation.

Problem Statement and Theoretical Framework.

As the speed of technological change increases, the half-life of usable knowledge, skills and abilities (KSAs) decreases. However, many organizations are not updating this information to include the rapid changes in technology. The half-life of a job or an occupation introduces the serious problem of keeping job descriptions accurate and in compliance with Federal regulations. If job descriptions are kept accurate, Human Resource Management (HRM) /Human Resource Development (HRD) personnel need to conduct job analyses at the half-life points of the job or occupation. As more frequent job analyses are conducted, the cost of updating documents increases and the need for the traditional semi-annual or annual needs assessment diminishes. The JA tells the employer and his/her HRM/HRD personnel what KSA updates are needed.

The validity and reliability of many job descriptions and training programs are seriously degraded due to their lack of content validity and reliability. To minimize the degradation of a training/job description's validity and reliability, and the cost of replicating the job analysis process as a whole, a job analysis process must be used. The question faced by HRM/HRD personnel is "Which job analysis method(s) should I select?" The contribution this investigation makes to HRM/HRD is to provide findings that assist analysts in assuring validity, reliability, and flexibility while minimizing the cost of job analysis.

Research Questions

This descriptive research survey seeks to answer the following questions:

1. Which JA method studied is perceived to be the most effective for HRM/HRD personnel?
2. Which JA method studied is most versatile or adaptable to job changes?
3. Which JA method studied is perceived to be the least expensive to perform?

Methodology

During the late 1980s and early 1990s, the vocational education program area at The Ohio State University (OSU) underwent a significant downsizing of its academic offerings. The faculty utilized *Instructors Competencies*: *The Standards* (Hutchison, Shepherd, & Stein, 1988) and the *American Society for Training and Development (ASTD) Models for HRD Practices - Competencies* (McLagan, 1989) to create an undergraduate specialization in technical education and training. Faculty recognized the importance of job analysis but could not agree on the JA methods to be taught. As a result, six JA methods recognized to be the most widely used, were investigated to facilitate arriving at a consensus.

To facilitate this investigation, the University provided a seed grant to identify a practical, reliable, and cost effective JA method that could withstand the rigors of a legal challenge. Levine's (1983) research identified important characteristics/concerns of popular job analysis methods to include versatility, standardization, acceptability, amount of training required, employee sample size, reliability, validity, costs, outcome quality, and completion time.

A purposeful sample of 180 job analysis practitioners and authors were invited to participate in the survey to address the differences. OSU Vocational and Technical Education faculty members were not surveyed to minimize the potential of internal bias. A total of 140 respondents agreed to participate in the survey. Of the 140 survey instruments mailed, 65% were returned within 30 days. Follow-up telephone calls were made to non-respondents, but no additional responses were received. Of the 91 returns received, 64 were usable. Usable is defined as those responses where the respondents answered all questions relative to at least one JA method. The respondents evaluated the JA methods with which they were familiar (see Tables 1 and 2). Because no respondent answered all questions in the six parts of the survey, the usable instruments were divided into six sub-instruments totaling 115. A sub-instrument represents a complete set of answers for a given JA method. Tables 1 and 2 reflect the findings from the Sage & Rinando study (1992). These data were used to answer the research questions in this survey.

Findings

Six JA methods were evaluated by 91 respondents. Sixty-four percent of the respondents answered all questions for three or four JA methods. These respondents could be classified as authors and researchers. Ratings yielded information about the purposes for JAs that included job descriptions, job classifications, job design, employee qualifications, employee training, and quasi-legal and legal requirements for each of the six selected JA methods. Each sub-instrument was evaluated on a 5-point scale with five being the highest rating possible and one being the lowest. Table 1, "Comparison of Job Analysis Purpose", reflects the average scores for each purpose.

Table 1 Comparison of Job Analysis Purposes

JA Method → / Purposes ↓	Position Analysis Questionnaire (n = 21)	Critical Incident Technique (n = 19)	TI/Codap (n = 22)	atCodap (n = 11)	Functional Job Analysis (n = 28)	DACUM (n = 14)
Job Descriptions	2.76	2.95	4.00	4.09	3.93	1.64
Job Classifications	2.38	2.05	3.59	3.55	3.68	1.07
Job Design	2.24	2.47	3.91	3.91	3.64	1.00
Employee Qualifications	2.48	2.32	4.14	4.18	3.64	1.00
Employee Training	2.86	2.79	3.18	3.27	2.86	1.57
Quasi-Legal and Legal Requirements	2.05	1.79	4.27	4.36	2.61	1.00
AVERAGE RANK	2.46	2.45	3.76	3.81	3.40	1.18

The JA method that received the highest average score (4.09) for preparing job descriptions was atCODAP. Functional Job Analysis (3.68) was the method receiving the highest average score for accomplishing job classifications. Both TI/CODAP and atCODAP received the highest average score (3.91) for job design. AtCODAP was the JA method receiving the highest average score for Employee Qualifications (4.18), Employee Training (3.27, and Quasi-legal and legal requirements (4.36).

Functional Job Analysis received the highest average score (3.46) for Employee Performance Appraisals. The overall highest rankings were for TI/CODAP (3.76), atCODAP (3.81), and Functional Job Analysis (3.40). Practicality concerns for each method were also considered.

Table 2 reflects the average rank ratings for each JA method in terms of versatility, acceptability, amount of training required, employee sample size, reliability, validity, costs, completion time, and average rank or overall effectiveness for each JA method.

Table 2 Comparison of Job Analysis Concerns

JA Method → / Concerns ↓	Position Analysis Questionnaire (n = 21)	Critical Incident Technique (n = 19)	TI/Codap (n = 22)	atCodap (n = 11)	Functional Job Analysis (n = 28)	DACUM (n = 14)
Versatility (Adaptability)	4.14	4.00	4.22	4.18	3.86	2.64
Acceptability	3.38	2.71	3.39	3.45	3.00	0.14
Amount of Training Required	2.81	2.57	2.13	3.36	2.68	1.86
Employee Sample Size	2.90	2.65	2.48	3.82	2.68	1.29
Reliability	3.57	2.81	4.00	4.27	2.96	1.86
Validity	2.86	1.67	4.00	4.36	2.46	1.21
Costs	2.57	2.62	1.74	3.91	2.61	4.07
Completion Time	2.57	1.86	2.00	3.64	2.61	3.86
AVERAGE RANK	3.10	2.61	3.26	3.87	2.86	2.12

The JA method in our sample that received the highest average score for being the most versatile or adaptable to job changes was TI/CODAP (4.22). DACUM was the JA method receiving the highest average score for both Costs (4.07) and Completion Time (3.86). atCODAP received the highest average scores for Acceptability (3.45), Amount of Training Required (3.36), Employee Sample Size (3.82), Reliability (4.27), and Validity (4.36) making it the JA method of choice by most respondents. JA methods, PAQ, TI/CODAP, and atCODAP were rated the most effective with average rankings of 3.10, 3.26, and 3. 87 respectively. atCODAP (3.87) was ranked slightly higher than all other JA methods included in the study.

Conclusions

Q1. Which JA method studied is perceived to be the most effective for HRM/HRD personnel?

The results relating to purposes indicate that the atCODAP methodologies received the highest ratings. It is noted that a modified DACUM process was frequently used by each of the methodologies as a preliminary instrument development strategy. Thus, job-oriented methodologies were rated higher than job dimension strategies. The results of the concerns section again indicate that the CODAP JA methods were ranked highest. These results, however, can not be taken as the final word because of the number

of new JA methods which have emerged since these data were gathered Methods that ranked high in acceptability, validity, and reliability typically are more costly and require more time to complete. atCODAP ranked high in these areas and was perceived to be a complete research methodology by respondents.

Q2. Which JA method studied is most versatile or adaptable to job changes?

Four methods, PQA, CIT, TI/CODAP, and atCODAP ranked highest in their versatility. A high rating in versatility suggests that the instrument developed by these methods could be easily adapted to many uses.

Q3. Which JA method studied is perceived to be the least expensive to perform?

DACUM ranked highest in cost effectiveness. DACUM, however, reflects a lower cost because the client assumes a portion of the costs. It is noted that no validity or reliability measurements are accomplished by DACUM facilitators. atCODAP's time and costs are not assumed by the client to the same degree as DACUM, therefore, depending on what is needed by the organization, atCODAP may be able to satisfy the organization's needs, including reliability and validity measurements, at an overall cost equal to or lower than DACUM.

Implications for HRM/HRD Practitioners

The results of this study failed to generate explicit answers to the research questions. First, atCODAP's research method and practicality concerns allowed it to be selected as the JA method of choice to be taught in OSU's vocational education and HRD curricula. The decision was influenced by CODAP's high ratings from the studies performed which reflected completeness and legal defensibility,

Second, even with a large number of OSU's faculty being trained as DACUM facilitators, the faculty committee acknowledged the importance of teaching several research methods as part of the JA process. As a result, no single JA method was recommended to be introduced as part of the course curriculum.

Third, due to the improvements offered by atCODAP, a more cost and time effective process has been identified for employers to determine what employees are doing on the job. Survey findings can assist HRM/HRD personnel in selecting the JA method best suited for their needs.

Need for Future Research

1. There is a significant need to evaluate all available personal computer JA methodologies which generate JA instruments or record an incumbent's response.
2. Due to the number of truncated JA methods being introduced for computer platforms , the traditional JA methods and the truncated JA methods need to be evaluated together in a new study so that the new JA methodologies, emerging since the Sage & Rinando study (1991), are not excluded from evaluation.
3. A new study needs to be conducted to identify and evaluate the research methods used by each JA strategy both at OSU and other institutions.
4. Research is needed to establish a standard for how analysts determine the half-life of a job or occupation.

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A Survey About Training Needs Assessment Practices in Selected Organizations: Summary of Results

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Training needs assessment (TNA) is an essential starting point for any planned learning experience. Yet little is known about actual practice. This article summarizes results of a 1995 survey of ASTD members. Although limited by a low response rate of only 11.7% (41 surveys returned), the results indicated that respondents conduct TNA most often for technical, clerical and supervisory employees. Respondents used individual development plans, focus groups and interviews most often as TNA methods but felt that the DACUM method, interviews and individual development plans (in that order) were the most effective.

Training needs assessment (TNA) "is a tool for determining valid and useful problems which are philosophically as well as practically sound," writes Kaufman and English (1979, p. 31). Perhaps best understood as "the systematic study of a problem or innovation, incorporating data and opinions from varied sources, in order to make decisions or recommendations about what should happen next" (Rossett, 1987, p. 3), TNA is essential to success in today's cost-conscious, downsized and fast-paced business settings because "training needs identify what people must *learn* if they are to perform successfully" (Robinson & Robinson, 1995, p. 24). Without using TNA, training professionals may end up doing nothing more than providing courses, entertaining employees, making people feel good, and fixing isolated problems without any clear sense of how much or how well their efforts contribute to improving employee performance or humanizing the workplace (Cosgrove & Speed, 1995). Unfortunately, that may be exactly what is happening in too many cases (Cosgrove & Speed, 1995). Although much has been written about TNA (see Moseley & Heaney, 1994), too little is known about typical TNA practices in U. S. organizations today.

What is the status of TNA? To answer that general question--and continue the line of investigation begun with an earlier study on perceived performance problems, causes and solutions (Rothwell, 1996)--the author prepared and mailed a survey to 350 randomly-selected members of the American Society for Training and Development (ASTD) in May 1995. Although the response rate was disappointingly low--only 41 surveys were returned by September 1995, making the response rate a mere 11.7%--the results of this descriptive and exploratory do shed some light on current practices. They also raise additional, intriguing questions about TNA.

This paper summarizes the results of the study. In the sections that follow the author will describe the research questions guiding the study, the study methodology, key conclusions and issues for future investigation.

Research Questions

The major goal was to assess current TNA practices. More specific study goals focused around answering such questions as these:

1. What job categories are the most frequent targets of systematic TNA methods?
2. What TNA methods are most frequently used by selected HRD professionals who are ASTD members?
3. What TNA methods are perceived to be most effective by selected HRD professionals who are ASTD members?

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4. What did the survey respondents perceive to be the biggest problems or difficulties faced by organizations that conduct TNA?

5. What did the survey respondents perceive to be the biggest advantages that are gained by organizations that conduct TNA?

Methodology

The researcher began the study by drafting a survey to address the research questions listed above. The 4-page survey consisted of 10 items and numerous subitems. Questions 1-4 solicited background information about respondents and their organizations; Question 5 solicited information about the conditions leading to TNA in the organization; Question 6 solicited information about the frequency of TNA conducted for various job categories in the organization; Question 7 solicited information about how often respondents used various TNA methods and how effective respondents perceived them to be. Question 8 inquired about the biggest problems encountered by respondents in conducting TNA; Question 9 inquired about the biggest advantages resulting from TNA when conducted in the respondents' organizations. Finally, Question 10 asked respondents to make any additional comments about TNA they wished.

How Was The Survey Prepared? Two HRD professionals reviewed the survey prior to mailing. The researcher revised the survey based on their recommendations.

How Was The Survey Conducted? In May 1995 the researcher selected a random sample of 350 HRD professionals from the 1994 membership list of the American Society for Training and Development and mailed the questionnaire on May 5, 1995. Approximately 2 weeks after the survey was mailed, a follow-up postcard was sent to the original list of survey recipients to encourage a response. Names were selected from the alphabetic listing of ASTD members. Consultants and academicians were excluded when their names were drawn for the sample. No effort was made to follow-up with nonrespondents.

Limitations of The Survey. The survey results should be viewed cautiously for several reasons. This study was limited by (1) a low response rate, even for a survey of this kind; (2) possible systematic bias resulting from the use of a random sample of members of the American Society for Training and Development; and (3) no follow up with nonrespondents. Given the study's limitations, the results cannot be generalized beyond the respondent group.

Results and Conclusions

Although the response rate as 11.7%, not all respondents answered every question. Hence, responses vary by item. This section will report on the demographic information about the respondents and answer the major research questions posed by the study.

What Demographic Information Was Collected About the Respondents? Of the 33 respondents who indicated the industry in which their organization was classified, 10 (30%) represented manufacturing. Three respondents (9%) marked "transportation/communication/electric/gas," 1 (3%) marked "retail trade," 2 (6%) marked "finance, insurance, real estate," 5 (15%) marked "healthcare," 6 (18%) marked "government/armed forces," and 6 (18%) marked "other."

Of the 41 respondents who indicated the number of people employed by their organizations, 10(24%) indicated their organizations employed between 2000-4999 workers; 8(20%) marked 10000 and above, 8(20%) marked 500-1999, 7 (17%) marked 0-99, 4 (10%) marked 5000-9999, 3 (7%) marked 250-499, and 1 (2%) marked 100-249.

Of the 30 respondents who chose to indicate whether they have responsibility for supervising staff, 18 (60%) marked "yes" and 12 (40%) marked "no."

Question 1: What Job Categories Are the Most Frequent Targets of Systematic Training Needs Assessment Methods? Respondents were asked to indicate "how often your organization conducts training needs assessment for each job category." They were then presented with a list of possible job categories and frequencies. The survey results are presented in Table 1. The results show that respondents collectively are assessing the training needs of technical employees, clerical employees

Table 1: Frequency of Training Needs Assessment by Job Category

Job Category	Frequency								
	Never	Once every 6+ yrs.	Once every 4-6 yrs.	Once every 3-4 yrs.	Once every 2-3 yrs.	Once every 1-2 yrs.	Once every year	Mean	Stnd Dev.
Executives	29	2	3	1	2	7	10	3.11	2.57
Middle Managers	18	3	1	4	4	9	13	4.0	2.55
Professional employees	16	4	3	1	5	8	16	4.19	2.56
Technical employees	12	2	3	-0-	4	12	18	4.76	2.46
Supervisors	12	2	4	4	4	5	22	4.68	2.47
Salespersons	13	3	3	2	3	3	13	4.0	2.6
Clerical employees	19	4	2	1	5	7	12	3.76	2.58
Production employees	12	1	1	2	4	7	16	4.63	2.55

and supervisors more often than other groups.

Question 2: What TNA Methods Are Most Frequently Used By Selected HRD Professionals Who Are ASTD members? Respondents were supplied with a list of 11 possible TNA methods and were asked to indicate which ones they used most often. The survey results are presented in Table 2. They show that, according to respondents, they are most often using individual development plans, focus groups and interviews as TNA methods.

Question 3: What TNA Methods Are Perceived to be Most Effective By Selected HRD Professionals Who Are ASTD Members? Respondents were asked to rate the relative effectiveness of a list of 11 possible TNA methods. The survey results are presented in Table 3. They show that, according to respondents, they perceive the most effective approach to be the DACUM method. DACUM is, of course, an acronym formed from portions of the phrase **D**eveloping **a** **C**urriculum **U**sing **M**ethods (Norton, 1985). Widely used in technical training and in community colleges, DACUM has also been the subject of innovation (Rothwell, 1995).

Question 4: What Do Respondents Perceive to be the Biggest Problems Organizations Face in Conducting TNA? Respondents were asked this question: "What are the biggest problems or difficulties that your organization has faced in conducting training needs assessment?" That question evoked 2 ½ pages of single-spaced responses. Content analysis revealed that the most common problems cited were lack of time, lack of staff and lack of expertise to conduct TNA. Sample verbatim responses are provided in Table 4.

Question 5: What Do Respondents Perceive to be the Biggest Advantages Gained by Organizations in Conducting TNA? Respondents were asked this question: "What are the biggest advantages your organization has gained by conducting training needs assessment?" That question evoked 2 pages of responses. Content analysis revealed that respondents most often cited such advantages as time-savings, cost-savings and proper identification of training requirements.

Table 2: Perceived Frequency of Use of Training Needs Assessment Methods							
Needs Assessment Method	**Frequency of Use**						
	Not at all 1	Seldom 2	Some times 3	Frequently 4	Very Frequently 5	Mean	Standard Deviation
Assessment Centers	30	4	-0-	1	-0-	1.20	0.58
Competency Assessment	12	4	9	7	4	2.64	1.42
The DACUM method	22	-0-	1	1	1	1.36	1.04
Document Reviews	11	3	8	4	4	2.57	1.45
Exit Interviews	4	8	3	7	8	3.23	1.45
Focus Groups	6	4	4	17	5	3.31	1.33
Individual Tests/ Assessment Instruments	5	10	6	10	6	3.05	1.33
Individual Development Plans	6	5	8	9	11	3.36	1.42
Interviews	1	3	8	2	4	3.28	1.18
Observations	2	4	6	2	2	2.88	1.20
Written/ Phone Surveys	3	3	5	3	3	3.00	1.37

Issues for Future Investigation

Here are some recommendations for future research on training needs assessment in no particular order of implied importance:

- What are the perceived advantages and disadvantages of each TNA method for each job category?
- What affects how often TNA is carried out?
- What affects the effectiveness of TNA approaches and methods?
- What challenges face external consultants who conduct TNA that differ from those

Table 3: Perceived Effectiveness of Training Needs Assessment Methods							
Needs Assessment Method	**Effectiveness of Method**						
	Not at all Effec-tive 1	Not Very Effective 2	Some times Effec-tive 3	Effective 4	Very Effective 5	Mean	Standard Deviation
Assessment Centers	5	2	4	5	2	2.83	1.42
Competency Assessment	-0-	-0-	13	13	2	3.61	0.63
The DACUM method	-0-	-0-	1	2	2	4.20	0.84
Document Reviews	-0-	3	8	8	1	3.35	0.81
Exit Interviews	-0-	4	13	6	3	3.31	0.88
Focus Groups	-0-	2	10	16	4	3.69	0.78
Individual Tests/ Assessment Instruments	-0-	2	15	10	5	3.56	0.84
Individual Development Plans	-0-	4	5	16	6	3.77	0.92
Interviews	-0-	-0-	5	9	2	3.81	0.66
Observations	-0-	-0-	5	7	1	3.69	0.63
Written/ Phone Surveys	-0-	5	4	6	-0-	3.07	0.88
Other Effective Methods: "Liability suits, court decisions, and demand"							

faced by internal consultant/practitioners?

- How well integrated are TNA and training evaluation practices?
- What are the relative strengths and weaknesses of commercially-available TNA software?

Table 4: The Biggest Problems in Conducting Training Needs Assessment	
Note: Each bulleted item below is the verbatim response from one respondent.	
■	Being consistent in when & how Follow-up to make changes to training material
■	Time factor = low return rate; knowing how to construct the assessment
■	1. Time or lack of it 2. Perception of senior management that something is a training issue when it's really something else
■	1. Management willingness to deal with 2. Not everyone returns surveys 3. Not staff or resources to purposely (?) analyze changing competencies skills for jobs changing so fast
■	1. Exit interviews = Ex-employees do not return 2. Performance reviews = Training needs listed are too general
■	1. The diversity of the group makes identifying needs difficult 2. Supervisors not really knowing what the employees' training needs are
■	1. Manpower to conduct needs assessment 2. Time it takes to analyze macro needs analysis 3. Staying focused on results, not on efforts
■	1. Getting associates to identify training needs 2. Getting management & nonmanagement associates to respond
■	1. Compiling data in a user friendly format 2. Identifying tools that focus on retraining 3. Analyzing data quickly and efficiently
■	1. Identify best method to conduct TNA 2. Design/identify instrument to conduct TNA
■	1. No one in our organization knows what instrument to use when & how
■	1. Perception by management 2. Lack of time 3. No commitment from upper management

Conclusion

Interest in TNA appears to be growing as HRD professionals find themselves faced with diminishing resources, increasing demands on their time and heightened accountability. Although this paper describes the results of a limited study, more intensive research should be directed to identifying and examining typical as well as best-in-class TNA practices. Without information about "what is really going on," it is difficult for academicians to develop worthwhile research agenda in the field.

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Table 5: The Biggest Advantages to Conducting Training Needs Assessment

Note: Each bulleted item below is the verbatim response from one respondent.

■	1.	Avoided expenditures for unnecessary training
	2.	Identified "hidden" talents/desires
	3.	Made people feel company was committed to their growth/development
■	1.	Less resources placed inaccurately
	2.	Peer review on competencies
	3.	Listening to internal customer needs through focus groups
■	1.	Selecting the correct intervention
■	1.	Identifies where the problem exists
■	1.	Focus--Employees know what current job competencies are
	2.	Specificity--Testing is more specific than general
	3.	Unity--Processes (i.e., assessment, development, successes) planning all on same system
■		Awareness--Give employees needed information
■	1.	Better training
	2.	More support for training
■	1.	Customers get what they needed
	2.	Clear return-on-investment shown
■	1.	Satisfied critical training requirements
	2.	Well-trained work force
■	1.	Structuring recommended curriculum
	2.	Identifying field training needs
	3.	Tracking training to business results
■	1.	Clear job definition
	2.	Targeted, appropriate training
■	1.	Tailor training sessions, to get the most impact
	2.	Isolate areas that require retraining
	3.	Create confidence in attendees, regarding material covered, its what they requested and not "useless" information for them
■	1.	The ability to plan for needed effort provides focus
	2.	Helps in budget preparation and justification
■	1.	Focus groups of what employees say they need but aren't getting the proper training in.
	2.	Advantage: The training department will know what areas employees need training in (based on gap feedback as 1 criteria).
	3.	After assessing needs, training can be conducted as soon as possible in order for the trainer to fill in performance gaps within their time frame(s).

Strategic Quality Training: A Comprehensive Training Process To Ensure Transfer of Learning

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Currently, Human Resource Development divisions are challenged to identify the return on corporate training investments. Utilizing the Strategic Quality Training model, the Connecticut Department of Labor a realized a minimum of 81% long term transfer of training for a technical skills training program. In addition, this training process supports the integration of training as a strategic business tool by: (a) involving all stakeholders in the training process, (b) reinforcing workplace application of training, and (c) evaluating the impact of training interventions.

To survive in the competitive economy of the 1990s, government agencies are making fundamental changes in business practice. These organizations are adopting new strategies for service delivery and new approaches for the management of technology (Dertouzos, Lester, & Solow, 1989; Hastings, 1995). Legislative mandates are forcing agencies to develop strategies to provide high quality service that meets or exceeds customer expectations. To support the new strategies, agencies are also redesigning work structures. Flat, flexible organizational designs are replacing the traditional hierarchies to encourage participative decision making that fosters the development of capable, committed workers (McLagan, 1989).

To support these changes competitive agencies are expanding the organizational role of Human Resource Development (HRD) divisions (e.g., Staff Development and Training) (Dertouzos, Lester, & Solow, 1989; Hastings, 1994). In fact, these divisions are shifting from reliance on an organizational role emphasizing the design and delivery of training to reliance on an organizational role emphasizing the creation of learning systems within the organization (Hastings, 1995; Senge, 1990). In this context, training is considered a tool that promotes organizational improvement.

Training that ensures state agencies' abilities to flexibly react to dramatic, rapid, multifaceted change requires transfer of training or the application of training skills in the workplace (Baldwin & Ford, 1988). Business success, therefore, depends on timely training that is incorporated in job tasks. Training must be provided to: (a) respond to customer needs, (b) support each agency's strategic mission, (c) develop skills of workers in all levels of the organization, (d) promote continuous improvement in the workplace, and (e) provide a significant return on investment (Hastings, 1995).

Accomplishing these objectives is a challenge for most state agencies. Recent survey data gathered by the Employment Service Capacity Building Project (1995) suggest that most agencies do not use training as a strategic business tool. In fact, the data suggest that training is an underutilized resource because training: (a) is generally offered as an isolated event, (b) is not always preceded by a needs assessment, (c) is not always designed to correct specific skill deficits, (d) does not routinely evaluate participants' learning or organizational improvement, (e) is not always delivered by professional trainers and (f) is not always related to customer needs. Thus, state agencies seeking to remain competitive face a common problem: How to implement a comprehensive training process that promotes the workplace application of training skills in support of the agency's mission and goals.

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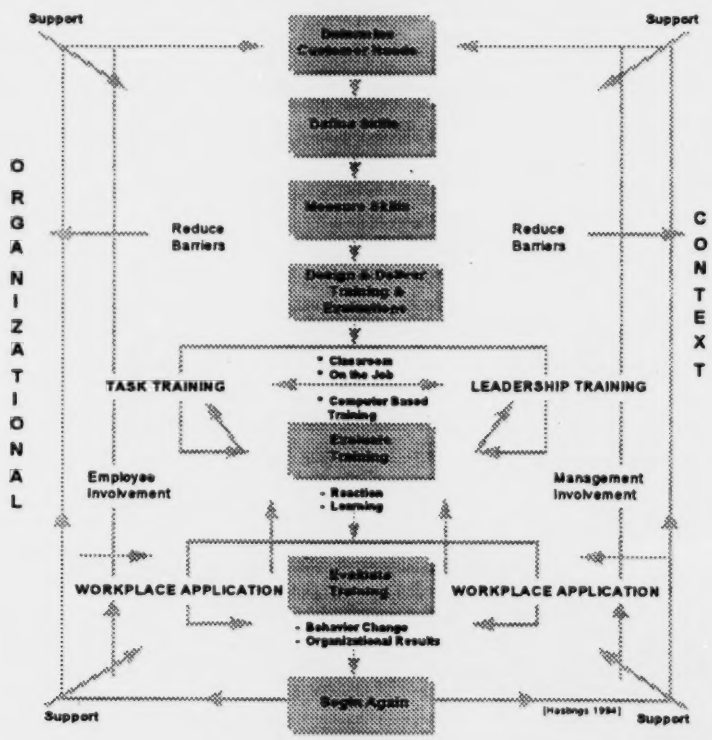
Transfer of Training

Transfer of training researchers (Baldwin & Ford, 1988; Laker, 1990; Porter & Lawler, 1990) have identified three factors that significantly enhance the probability of transfer of training. These interdependent factors are: instructional content that provided the skills and knowledge to do a job, motivation to use the skills and knowledge learned in the classroom, and a work environment that supports the use of the newly acquired skills and knowledge. To illustrate the interaction of these factors researchers (Broad and Newstrom, 1992; Huczynski & Lewis, 1980) propose that training has three distinct phases: (1) the pre-training phase characterized by the identification of the training need and the initiation of the motivation to engage in the learning process, (2) the learning phase characterized by the delivery of materials to give participants skills so they can improve job performance, and (3) the post-training phase characterized by the management of the work environment to promote transfer of knowledge, skills, and abilities learned in the classroom to work settings.

To incorporate training strategies for the three phases of training, other researchers (Broad & Newstrom, 1992, Goff, Hastings, & Sheckley, 1992) suggest that organizations form transfer partnerships that include three key stakeholders: the trainee, the trainer, and the manager. Together, these partners, work to support the long term workplace application of knowledge, skills, and abilities learned in a classroom. In this paradigm, on-the-job application of training is the major determinant of successful training. Training outcomes are measured with concrete examples of the integration of training concepts in daily work activities over time (Brinkerhoff & Gill, 1992). Additional research conducted at the Connecticut Department of Labor in 1994, determined that organizational constraints (e.g., differences in managers' behaviors, differences in managers' goals), work group constraints (e.g., differences in commitment of work groups, differences in goals of work groups), and individual constraints (e.g., age differences, differences in performance anxiety) must also be managed to attain consistent use of training skills in the work environment (Hastings, 1994).

Strategic Quality Training

Strategic Quality Training (Figure 1)



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In Step One of the Strategic Quality Training process, customer requirements are aligned with the agency's strategic mission to ensure the delivery of training that enhances the staff's capacity to deliver products and services customers want. In Step Two, the skills needed to provide missing or inadequate service are defined. Step Three includes the assessment of each employee's ability to perform required job tasks, the establishment of performance standards, and the design of a training plan to close the skill gap. To complete Step Four, HRD staff work with participants and their supervisors to design curriculum and evaluations as well as deliver the training. Two kinds of training are designed: (1) "task training" or training to transmit skills participants need to perform job tasks and (2) "leadership training" or training participants' supervisors need to learn how to support the workplace application of participants' new skills. Additionally, evaluations to determine participants' reactions to the training, participants' learning and participants' long term use of the training skills are designed. Once the training has been delivered the transfer of training is assessed in Step Five with the administration of evaluations immediately following the training and three to six months after the training has been completed. Finally, the data gathered in Step Five is used as baseline data for the next round of training. Modification of the training design and new training goals are the end results of the Strategic Quality Training process. In this final step continuous improvement begins with a re-examination of the customers' needs.

Methods and Procedures

Hastings used the Strategic Quality Training model to design training for 44 support staff workers at the Connecticut Department of Labor to improve the support services they delivered to field office workers. Specifically, the training was designed to cross-train workers previously providing one of three services (claims exam services, merit rating services, or benefit payment control services) to enable them to provide all three services. The three phase pay for skills cross-training program incorporated training to standardize procedures and evaluations to test employees' abilities to perform the new job tasks.

The training was developed to: (a) include all stakeholders in the design and delivery of the training and evaluations, (b) design the training to support the strategic mission of the agency, (c) use a Labor Management Committee to determine policy for training interventions, (d) combine classroom training and on-the-job training (e.g. task training for job incumbents), (e) build peer coaching and support into the training process, (f) use supervisors to train and evaluate performance, (g) teach supervisors how to coach and mentor employees (e.g., leadership training), (h) use evaluations immediately following the training, three months later, and six months later to assess employees' performance, (i) link training with job performance, and (j) use the training and the evaluations to pay employees for demonstrated ability to perform the new jobs (training used as a vehicle for promotion).

Evaluations were administered immediately following the training to determine participants' reaction to the training and to measure learning. Additional evaluations were administered three and six months after the training had been completed to determine long term application of training skills. All participants completed (a) a course evaluation, (b) a short answer question/simulated work exercise evaluation, and (c) two work sample evaluations.

The training and evaluation process (figure 2) was designed to check performance and provide improvement strategies at several points. To successfully complete each phase of the formal training, participants demonstrated the ability to use the training to complete short answer questions and job simulation exercises. Since workplace application of skills was expected, a rotation schedule to ensure the practice of training skills was implemented. In fact, supervisors reviewed work and assessed participants' abilities to meet performance standards using standardized evaluation forms at three and six month intervals after the training was completed.

The Training Process for Central Office Support Staff

Step One	Provide training
Step Two	Evaluate knowledge, skills, and abilities immediately following training
Step Three	(A) Provide time for workplace application of skills and development of individual development plans for areas of weak performance (B) Provide remediation
Step Four	Re-evaluate knowledge, skills and abilities
Step Five	Provide time for workplace application of training skills
Step Six	Evaluate workplace application of skills three months after training
Step Seven	Revise Individual Development Plans
Step Eight	Provide time for workplace application of skills
Step Nine	Re-evaluate the workplace application of skills to determine readiness for promotion
Step Ten	(A) Refine Individual Development Plans and continue to coach weak performers (B) Continue to monitor the performance of good performers
Step Eleven	Use performance standards to determine ratings for annual appraisals

Figure 2

Results

While the long term training goal was to provide improved customer service for the field staff, the immediate training goal was to provide a training process that ensured the workplace application of new skills. Consequently, Connecticut Department of Labor measured participants' reactions to the training and evaluation process, and participants' learning immediately following the training and at three month and six month intervals after the training had been completed.

Participants' Reactions. Immediately following each training session participants were asked to complete an evaluation of the training session. Overall, data collected determined that the trainees were pleased with the training as well as the abilities of each of the three training supervisors. For example, 92% of the participants stated that the training encouraged active participation. Ninety-six percent also stated that the trainer frequently or nearly always provided useful feedback and frequently or nearly always provided reinforcement and praise. In addition, trainers promoted learning by encouraging the sharing of ideas/information (89% strongly or completely agree), removing learning obstacles (86% strongly or completely agree), and modeling appropriate customer service behaviors (81% strongly or completely agree). Finally, participants believed that the evaluations were fair (97% agree), that the evaluation exercises matched the course content (97% agree), and that the evaluation would be graded fairly (98% agree).

Participants' Learning. As depicted in Table 1, 43 participants successfully completed evaluations for Claims Exam work, 41 participants successfully completed evaluations for Merit Rating work, and 42 participants successfully completed evaluations for Benefit Payment Control work. The six individuals who did not successfully complete the evaluations received additional training and then completed remediation evaluations. All of the six passed the remediation evaluations for a 100% success rate.

Evaluation of the Participants' Learning
(immediately following the training)

	1995 Central Office Staff N=44		
	Claims Exam	Merit Rating	BPCU*
% of Staff successfully completing the *initial* evaluations	97.7% (43 people)	93% (41 people)	93% (42 people)
% of Staff successfully completing the *remediation* evaluations	2.3% (1 person)	7% (3 people)	4.5% (2 people)
Totals	**100 % (44 people out of 44)**	**100 % (44 people) out of 44**	**100 % (44 people) out of 44**

* BPCU- Benefit Payment Control Unit

Table 1

Participants' Behavior Change. Successful completion of the initial evaluations, however, did not guarantee successful workplace application of skills. In fact, evaluations administered three months after the training recorded mixed results (NOTE: Only 26 training participants were required to take this evaluation because these 26 participants were the only trainees participating in the new work processes due to a reassignment of staff after the initial training was completed). As outlined in Table 2, participants were most successful in meeting performance standards for the Claims Exam tasks (24 individuals or 92%), Participants' demonstrated more difficulty, however, in meeting performance standards for BPCU tasks (18 people or 69% were successful) and Merit Rating tasks (11 individuals or 42% were successful).

Evaluation of the Change in Participants' Behavior
(three and six months after the training)

	1995 Central Office Support Staff N=26		
	Claims Exam	Merit Rating	BPCU
% of Staff successfully completing the follow-up assessment of work performance after *three* months	92% (24 people)	42% (11 people)	69% (18 people)
% of Staff successfully completing the follow-up assessment of work performance after *six* months	100% (26 people)	81% (21 people)	96% (25 people)
Totals	**100% (26 people)**	**81% (21 people)**	**96% (25 people)**

Table 2

Individual Development plans to promote continuous skill improvement were created to provide on-the-job training for employees unable to meet the performance standards. Supervisors mentored trainees and provided additional opportunities to practice training skills. In addition, focus groups of

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individuals unable to meet performance standards were held for the Merit Rating work and the BPCU work to identify best support strategies. Based on the focus group data, desk aids were revised to include more detail of the job tasks and the rotation schedule was changed to give participants longer rotations in the Merit Rating unit and the BPCU unit. The Merit Rating supervisor also conducted on-the-job training sessions to explain errors each day. Peer mentoring was also encouraged as an informal training strategy, especially in the Merit Rating unit.

Progress was formally assessed again six months after the training. At six months many more participants were successfully using the training skills to complete their daily work. In fact, all 26 participants (100%) were able to meet the performance standards for the Claims Exam tasks while 21 participants (81%) were able to meet the performance standards for the Merit Rating tasks and 25 participants (96%) were able to meet the performance standards for the BPCU tasks.

Additional Measures. To further the define the success of the training initiative, The Connecticut Department of Labor has determined that the training was successful based on its ability to successfully implement the Strategic Quality Training process to attain long term transfer of training. The following ten specific objectives were met:

1. Inclusion of all stakeholders in the design and delivery of the training and evaluations.
2. Combination of classroom and on-the-job training.
3. Utilization of supervisors for training and evaluating performance.
4. Inclusion of peer coaching and support in the training process.
5. Design of training to support the agency's strategic mission.
6. Administration of evaluations..
7. Utilization of training and evaluations to determine promotions..
8. Utilization of a Labor Management Committee..
9. Development of coaching/mentoring skills for supervisors..
10. Linkage of training and job performance.

Conclusions

This study demonstrates that careful, detailed planning of a training initiative can result in long-term transfer of training. Successful results, however, are not easily attained. In fact, several lessons can be learned from this study:

1. ***Transfer of Learning Requires Commitment from all Levels of the Organization.*** Transfer of learning can not be attained without commitment from all levels of the organization. Executives, managers, supervisors, and trainees must all be committed to the process. Because transfer requires a tremendous effort from many people, it's especially critical that managers and executives "walk the talk". In this case, Alice Carrier's (Director of Operational Support) consistent, visible commitment to the training initiative kept her subordinates engaged even when they complained that the process was "just too hard". In addition, Carrier attended meetings and focus group sessions to publicly model her commitment and gain support for the initiative at critical junctures in the process.
2. ***Staff Development Must Offer Performance Consulting Services.*** The traditional human resource development role must be expanded in organizations that are committed to developing staff. For this initiative, Staff Development personnel provided performance consulting services to guide the process. Not only did Staff Development personnel design and deliver the training and evaluations, but they also facilitated the three part training process. Staff Development monitored the process and used data to determine corrective strategies. In addition, Staff Development coached the supervisors, mentored the managers, and reported progress to executives and labor union representatives. This training initiative was successful, in part, because Staff Development orchestrated the entire process.
3. ***Resistance Should Be Expected.*** Change is always a threat to some individuals. Therefore, any cross-training initiative will be resisted by some employees in all levels of the organization. Connecticut Department of Labor managed the resistance by: (a) involving all stakeholders in the process, (b) conducting several group meetings to encourage participants' to share concerns, and (c) implementing changes in all steps of the process based on recommendations of participants. At all

times, supervisors, managers, and Staff Development personnel stressed that the training initiative was evolving and would be revised when necessary.

4. ***Communication Will Make or Break a Training Initiative.*** To successfully implement a cross-training initiative requires a commitment to good communication. During this training initiative Staff Development and the Director of Operational Support frequently communicated the vision and the steps needed to achieve success. Written memos, informal discussions, focus group discussions, and staff meetings were all used as communication tools.
5. ***Staff Will React Negatively to Evaluations.*** This training initiative utilized evaluations to assess participants' ability to perform new job duties. In addition, successful completion of the evaluations resulted in a promotion to a higher job classification. Consequently, participants reported anxiety about their abilities to pass the evaluations and wondered if the evaluations would be used to punish non-performers. Again, Staff Development, the Director of Operational Support, and the supervisors of the three units continually reminded staff that the goal of the training was to help staff successfully demonstrate their abilities to meet the performance standards. Over time visible management support (e.g., Individual Development Plans, feedback) reduced participants' apprehension. Based on supervisors' behaviors, participants learned to believe that the training goal was to help all participants succeed in the higher job classification.
6. ***Cross-Training Staff is a Challenge.*** This training initiative was designed to teach individuals how to integrate three distinct jobs. Connecticut DOL underestimated how long it would take to cross-train staff and underestimated how difficult it is to learn how to provide integrated services in a three month time period. Future cross-training will be designed to offer additional workplace support and will allow more time for participants to practice the new skills.

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Revisiting Perceptions of HRD Roles: Implications for HRD Curricula

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HRD practitioners and students enrolled in HRD or HRD-related programs were asked to rate thirteen HRD roles, selected from McLagan study (1989), regarding their importance to HRD practice and to identify new or emerging roles not included in McLagan's original list. The study revealed top roles to include Needs Analyst and Group Facilitator, and emerging roles to include among others Strategic Planner and Performance Technologist. A selected group of HRD or HRD-related course syllabi were reviewed in regard to coverage of the top roles identified.

In the last decade, different professional and academic groups have debated the need for common core roles that need to be addressed in college and university-based Human Resource Development (HRD) programs. The publication of the 1989 McLagan study, *Models for HRD Practice*, which became the standard of expected roles and competencies in the profession, subdued the ongoing debate. However, Willis & Kahnweiler (1995) argue that, "curriculum assumptions made on the basis of a taxonomy of what HRD practitioners currently do, cast primarily on the framework of 'deliverables,' would not adequately serve as the interest of a new and emergent profession" (p. 7-1). They postulate that the challenge to an HRD program is not only it's skill-based nature, but the consideration of "more reflective, theoretical, and integrated approaches to professional preparation" (p. 7-1).

Background

A review of the literature shows that the forces impacting business as a whole to change are also causing HRD as a function to follow suit. Chalofsky (1989) argues that the current research on the state of the practice and field of study is creating a major paradigm shift in how we envision HRD. However, he comments that "the state of the profession is still looking for a unifying base to rally around" (p. 176). Others who have joined the effort in defining the direction of the field argue from different perspectives: a shift from the behavior model to a transformative conception of learning (Watkins & Marsick, 1992); a rigorous definition and categorization of what the field is and is not (Nadler, 1992); or the use of competencies to facilitate the identification of HRD roles (McLagan, 1989).

Sussman & Kuzmits (1986) identify HRD roles as moving towards becoming more entrepreneurial. The traditional or administrative roles that portrayed HRD practitioners as reactive and subservient in problem-solving and made their interventions narrow and specific in closing performance gaps, have been replaced by entrepreneurial roles that are proactive, interdependent, and service-driven, and that can provide broad-based solutions. Walker (1989) identifies this change as starting in the 1960s and 1970s when HRD had been expected to specialize in the development of new practices and programs. In the 1980s, HRD shifted its emphasis on employee advocacy to teamwork and team building. Management expectations are playing a big part in reshaping the HRD roles of the 1990s. As partners with

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management, HRD practitioners have been asked to be directly involved in work force reductions, organizational mergers and acquisitions, productivity and total quality management efforts which are not necessarily function-specific activities. The changes in role expectations have pushed the human resource function to not only widen its scope, but to embrace key business concerns. As HRD practitioners begin to serve multiple constituencies, amidst rapidly changing environments, new roles are emerging that complement those already delineated.

Problem Statement

Upon reflection on the various points raised by the literature, as well as conversations with practitioners and students on the scope of their HRD programs, the researchers suspect that there is an existing discrepancy in what is being taught in the classroom and what is expected in practice of the graduates of HRD programs. Further, not all of the roles of McLagan (1989) are being fully addressed by HRD academic programs (Willis & Kahnweiler, 1995). Given the reality of what the academic programs address, the question becomes, "What are the critical areas of HRD practice that need to be communicated and taught to those who are entering the field?" Using the thirteen roles (refer to Table 1) as a starting point, this study looks at the current perceptions of what are critical for would-be practitioners from two perspectives, HRD students and practitioners.

Table 1. Selected HRD Roles Used in the Study (McLagan, 1989)

1. Evaluator	6. Program Designer	11. Marketer
2. Group Facilitator	7. Media Specialist	12. Task Analyst
3. Instructor	8. Needs Analyst	13. Theoretician
4. Instructional Writer	9. Program Administrator	
5. Development Counselor	10. Manager, Trng. & Devt.	

Research Questions

This study addresses four main questions:

1) What roles are identified by practitioners as critical in the current practice of HRD?
2) What roles are identified by students (of adult education, HRD, and instructional technology) as critical in the field of HRD? Do perceptions of practitioners and students differ?
3) What do practitioners and students (of adult education, HRD, and instructional technology) identify as critically emerging roles in HRD?
4) Are HRD curricula consistent with perceptions of criticality?

Methodology

Data was collected from two main sources: a survey questionnaire asking for perceptions of HRD roles that are important to HRD practice from HRD students and practitioners; and a compilation of HRD course syllabi (Gardner & Korth, 1995) which was used to identify HRD roles addressed by selected beginning and advanced level courses.

Survey. The survey was administered to graduate students of adult education, HRD, and instructional technology programs, enrolled in an HRD or HRD-related course in Fall, 1995 from four universities in Georgia, Illinois, New Mexico, and Ohio. Also, a group of HRD practitioners, who are based within the Chicago area and its suburbs, were surveyed. The survey effort generated seventy-five complete and valid questionnaires for data analysis.

To check for differentiation of perception across the surveyed population, the data was categorized into three groups of respondents: practitioners, student practitioners, and student non- practitioners. Practitioners are defined as individuals who perform one or more of the identified HRD roles on a full-time basis. Student practitioners are practitioners who are enrolled in an HRD program or HRD-related course as part of their professional development. Finally, student non-practitioners are graduate students enrolled in HRD or HRD-related programs but not working in HRD contexts. Most student non-practitioners are taking the HRD course as an elective to their graduate degree programs or as an initial move for a career change.

Course Syllabi. Finally, from compilation of HRD-related course syllabi (Gardner & Korth, 1995), nineteen beginning and sixteen advanced level courses were reviewed to identify the HRD roles that they addressed. In the collection of the syllabi, the editors attached a cover page that asked respondents to identify which of the HRD roles are being addressed by their syllabi. The syllabi included in the compilation were used during the academic year 1993-1994. This same set of syllabi was used to verify if the courses were addressing the emerging roles that survey respondents recommended.

Results

HRD practitioners, student practitioners and student non-practitioners were asked to rate each role on a scale from 1 - 4 (with 4=highest) on its importance to HRD practice. Means and standard deviations for each role were computed, and the means were ranked from Most Important (1) to Least Important (13). Table 2 provides the means, standard deviations, and rankings of the thirteen roles for each group.

Perceived Importance of HRD Roles to HRD Practice. With the exception of Media Specialist and Theoretician, all roles were perceived as important (scoring 3.0 or better) by all groups. HRD practitioners rated the three most important roles to be: Group Facilitator, Needs Analyst and Instructor. Student practitioners rated the three most important roles as Needs Analyst, Group Facilitator, and a tie between Manager of Training and Development and Program Designer. Student non-practitioners rated Needs Analyst, Group Facilitator, and Program Designer as the top three roles.

Across audiences, there is agreement that the roles of Group Facilitator and Needs Analyst are among the most important roles in HRD practice. There is also agreement that, while not in the top three, the roles of Evaluator and Manager of Training and Development are important to HRD practice, with all three groups rating them within the top five.

By contrast, there appears to be a difference in perception of the importance of the roles of Instructor, Program Designer, and Program Administrator. Instructor was rated very highly by practitioners (2nd in ranking) while student practitioners and student non-practitioners rated it much lower (7th and 5th in rankings respectively). Program Designer was rated lower by practitioners (placing it 6th in ranking) while student practitioners and student non-practitioners rated it much higher (placing it 3rd for both groups). Finally, student non-practitioners felt Program Administrator was an important role, rating it much higher (placing it 5th) while both practitioners and student practitioners rated it much lower (placing it 10th for both groups).

There were also some consistencies across groups regarding which roles were perceived as less critical to the practice of HRD. All audiences perceived Media Specialist and Theoretician as one of the least important roles.

Table 2. Comparison of Perceptions on HRD Roles that are Important to HRD Practice

	Practitioners N=17			*Student Practitioners N=24*			*Student-Non Practitioners N=34*		
HRD Role	*R*	*M*	*SD*	*R*	*M*	*SD*	*R*	*M*	*SD*
Group Facilitator	1	3.71	0.456	2	3.58	0.493	2	3.68	0.468
Needs Analyst	2	3.59	0.599	1	3.79	0.406	1	3.81	0.405
Instructor	2	3.59	0.599	7	3.21	0.815	5	3.47	0.784
Evaluator	4	3.53	0.606	5	3.46	0.706	4	3.59	0.599
Manager, Trng. & Devt.	5	3.47	0.696	3	3.50	0.791	5	3.47	0.776
Program Designer	6	3.41	0.641	3	3.50	0.500	3	3.61	0.543
Instructional Writer	7	3.35	0.762	9	3.17	0.687	8	3.44	0.735
Development Counselor	8	3.24	0.729	6	3.29	0.676	9	3.38	0.728
Marketer	8	3.24	0.546	11	3.08	0.909	12	2.97	0.891
Program Administrator	10	3.18	0.706	10	3.13	0.781	5	3.47	0.652
Task Analyst	10	3.18	0.706	7	3.21	0.763	10	3.35	0.681
Media Specialist	12	2.88	0.832	11	3.08	0.909	11	3.10	0.729
Theoretician	13	2.65	0.026	13	2.88	0.086	12	2.97	0.857

Ratings ranged from 1 = Low Importance to 4 = High Importance.
R = Rank; M = Mean; and SD = Standard Deviation.

However, there were more differences than similarities when one looked at perceptions of less critical roles. For example, while student practitioners and student non-practitioners felt the role of Marketer was among the lowest (placing it 11th and 12th respectively), practitioners rated the role of Marketer as somewhat higher in importance (8th). Finally, student practitioners disagreed with practitioners and student non-practitioners on the importance of Task Analyst, rating it high (7th) while the two other groups rated it among the lowest (10th).

As a second source of data to validate rating scores, we asked respondents to list out the three roles they felt were most critical to the practice of HRD. Table 3 provides the frequency count for each role listed as a top three role. These are consistent with the survey data in regards to the six identified as the most important roles and the six least important. Note, however, that Program Designer (which was selected second most often) was listed more frequently than would have been expected based on the ranking of means in Table 2.

Table 3. HRD Roles Selected as One of the Three Most Important to HRD Practice

	Frequency Count		
HRD Role	*Practitioner N=17*	*Student Practitioner N=24*	*Student Non-Practitioner N=34*
Needs Analyst	9	11	15
Program Designer	8	9	12
Evaluator	5	5	18
Group Facilitator	8	7	8
Instructor	5	4	11
Manager, Trng. & Devt.	4	6	9
Development Counselor	2	3	6
Program Administrator	1	3	5
Task Analyst	2	5	2
Instructional Writer	2	2	3
Marketer	1	4	3
Theoretician	---	3	1
Media Specialist	---	---	2

Emerging Roles that are Important to HRD Practice. We provided all three groups with the opportunity to identify additional roles beyond the selected thirteen HRD roles which they felt are (or will be) critical to the practice of HRD. Table 4 provides the frequency of new or emerging roles identified by each group.

Table 4. Emerging Roles that Survey Respondents Identified as Important to HRD Practice

	Frequency Count		
Emerging HRD Role	*Practitioners N=17*	*Student Practitioners N=24*	*Student Non-Practitioners N=34*
Strategic Planner	3	2	---
Organization Developer	1	1	1
Benefits/Compensation Coordinator	2	---	1
Budget/Cost Analyst	1	---	2
Performance Technologist	1	2	---
Manager of Change	1	1	---
Quality Program Manager	1	1	---
Organizational Communications Spec.	1	1	---
Recruiter	2	---	---
Team Builder	---	1	---
Negotiator	---	1	---
Leader	---	---	1

It was not surprising that student non-practitioners were unable to identify more than a handful of emerging roles for HRD given their limited exposure to day-to-day business trends. Practitioners had no difficulty identifying new and emerging roles. Among the top roles were Strategic Planner, Organization Developer, Benefits and Compensation Coordinator, Budget and Cost Analyst, Manager of Change, and Performance Technologist. It is likely that the role of Benefits and Compensation Coordinator came out in the survey because it is a time-consuming and on-going role which is not apparently covered in any of the thirteen other roles. The other five roles, however, appear to be based on emerging trends in HRD practice and in the business world in general.

HRD Academic Program Consistency with Perceptions of the Criticality of HRD roles. Thirty-five syllabi from HRD or HRD-related graduate-level courses (Gardner & Korth, 1995) were compared to HRD roles to determine if courses were covering the roles identified as most important to HRD practice as based on survey results (see Tables 2 and 3). Table 5 provides the number of course syllabi which address each of the original thirteen roles. Table 6 provides the number of course syllabi which address the top six emerging roles identified in the survey (see Table 4).

Table 5. Number of Selected HRD Course Syllabi that Address Critical HRD Roles

HRD Roles	*Beginning Course N=19*	*Advanced Course N=16*	*Total N=35*
Instructor ***	11	5	16
Program Designer	12	3	15
Manager, Trng. &Devt./HRD **	6	8	14
Needs Analyst	7	2	9
Organizational Change Agent **	7	2	9
Evaluator	5	2	7
Program Administrator	4	2	6
Materials Developer **	5	1	6
Development/Career Counselor **	3	2	5
Marketer	2	1	3
Theoretician/Researcher **	2	---	2
Group Facilitator ***	*	*	*
Media Specialist	*	*	*
Task Analyst	*	*	*
Instructional Writer	*	*	*

* *HRD roles that are reflected in McLagan (1989) but not in Gardner & Korth (1995).*
** *Other HRD roles that Gardner & Korth (1995) used.*
*** *Gardner & Korth (1995) combined Instructor/Facilitator for their survey.*

It appears that four of the top six roles (identified in italics in Table 5) are addressed often in HRD courses. Instructor and Group Facilitator roles (these were combined in the Gardner & Korth, 1995 data) are addressed in 16 of the 35 syllabi. Program Designer is addressed in 15 of the 35 course syllabi. Manager of Training and Development is addressed in 14 of the 35 syllabi, with the majority of coverage (8) in advanced level courses.

The remaining of the top six roles of Evaluator and Needs Analyst, while covered in several course syllabi, do not appear to be addressed consistently with their importance ratings. Evaluator is addressed in 7 of the 35 course syllabi. Needs Analyst (which was rated

as most or second most important by all groups) was addressed in 9 of the 35 courses, 7 of these being beginning level courses.

The emerging role of Organizational Developer was addressed often in HRD course syllabi (12 of the 35). The remaining top six emerging roles (Performance Technologist, Manager of Change, Strategic Planner, Budget/Cost Analyst, and Benefits/Compensation Coordinator) were not addressed frequently in HRD or HRD-related courses. The role of Benefits/Compensation Coordinator was not addressed in any of the HRD course syllabi reviewed.

Table 6. Number of Selected HRD Syllabi that Address Emerging HRD Roles

Emerging HRD Roles	*Beginning Course N=19*	*Advanced Course N=16*	*Total N=35*
Organizational Developer	9	3	12
Performance Technologist	1	5	6
Manager of Change	2	2	4
Strategic Planner	1	1	2
Budget/Cost Analyst	2	---	2
Benefits/Compensation Coordinator	---	---	---

Discussion on the Implications for HRD Curricula

This study provides academic programs information to consider in the evaluation and development of their current HRD courses and curricula. It is meant to provide one source of data which allows academic programs to assess their consistency with current perceptions and emerging trends in the practice of HRD.

First, the study helps to validate that most of the roles identified in McLagan (1989) remain important to the practice of HRD. With the exception of Media Specialist and Theoretician, all roles rated above 3.0 (with 4.0=Most Important). Part of the lack of enthusiasm over Media Specialist may be in the semantics involving the term "media," which is now in instructional technology circles most often replaced with the term "technology." This suggests that Technology Specialist would likely rate higher than Media Specialist. Another explanation may be that HRD in practice no longer embraces the importance of a single area of expertise or specialty. This is reflected in the fact that the roles rated highest were broad based and related to leading and participating in organizational problem-solving (Needs Analyst, Group Facilitator and Evaluator). The lower rating for Theoretician is distressing. Academicians and researchers do not hesitate to see value in theory and research. Perceptions of practitioners and students, however, may be influenced by their perceptions of limited direct relevancy between HRD theories and their application to solving specific organizational problems.

Second, this study provides a source of comparison for assessing the strategic direction of academic programs in HRD. Based on the perceptions of practitioners and students regarding the most important roles in current practice, this study suggests programs consider reviewing curricula in regards to where and in what depth the six top roles of Needs Analyst, Group Facilitator, Instructor, Manager of Training and Development, Evaluator and Program Designer are addressed.

Further, this study provides insights into the emerging HRD roles which are important for academic programs to assess frequently and integrate into curricula in order to maintain marketable graduates. In particular, this study suggests that academic programs consider reviewing curricula in regards to how and where roles related to Strategic Planning, Change

Management, Budget/Cost Analysis, Benefits/Compensation, and Performance Technology are being addressed.

As the HRD field continues to evolve and expand, and additional roles continue to be identified in practice, it may be important for academic programs to create program visions or identities which provide in-depth coverage for critical roles as determined by local customers. It is a growing challenge for academic programs, graduate programs in particular, to continue to "cram" additional content into a limited number of credit hours. This study may provide one source of data for assessing priorities in current curricula, and for assessing programs for areas of new emphasis (e.g., in organizational development or performance technology) to meet local customer expectations.

Finally, this study supports the benefits of a strategic approach to the development and assessment of curricula. Like our public sector counterparts, academic institutions *can* develop high quality academic programs based on strong visions and strategic plans, and validate them through solid measures of customer (student and practitioner) expectations and satisfaction.

Directions for Further Research

This study reflects one step toward a more integrative and strategic approach to designing and developing HRD curricula. Several questions remain to be answered. If the emerging roles identified in this study are important to HRD practice, what specific skills or competencies define successful performance of each role? Are there additional skills or competencies that are integrative and address multiple roles that must also be addressed in academic curricula (e.g., negotiation, learning to learn, etc.)? How can these be identified and validated? What other sources of perception (customers) are important in developing a strategic HRD curriculum?

Next steps for this research team will be to continue the research toward the validation and identification of skills and competencies, validating those identified by McLagan (1989) and analyzing further emerging roles in HRD practice.

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Establishing a Research Base for Professional Development

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As technology advances in the workplace and preparatory teaching/learning strategies change to meet the resulting challenges, actions need to be taken to assess teacher training needs, plan teacher training programs and identify existing materials or develop new competency-based materials designed specifically to meet the training needs of career related teachers. Career related teachers are defined for purposes of this study as secondary level vocational teachers, postsecondary level vocational-technical instructors, academic teachers working in an occupational setting, and business-industry trainers. This paper presents important findings from a national study which included assessing teacher training needs and verifying tasks for career related teachers. Findings will be used to establish a research base for the professional development of teachers.

Problem Statement and Theoretical Framework

There is a need for high-quality and up-to-date instructional materials that address the competencies essential to excellent teaching. Competencies are defined as tasks performed by the career related teachers, therefore, for the purpose of this study, the terms 'tasks' and 'competencies' will be used interchangeably. According to Teacher Education Task Force findings (1995), many persons representing a whole range of teacher education institutions and professional associations throughout the United States have expressed concern regarding the ability to adequately address this need in the 21st century. If we are to have well-prepared youth and adults who can enter the workforce prepared for success, we must first have well-prepared teachers and instructors. The preparation of knowledgeable and skilled teachers requires the availability of high-quality instructional materials which address the classic core competencies as well as the new concept priority areas. To address these needs, actions were initiated to conduct a national needs assessment, an occupational analysis, a national task verification, a detailed task analysis, and the systematic development of teaching materials (learning packages) which address the core competencies needed by secondary and postsecondary teachers and instructors.

Once the teaching materials have been developed, the materials will be duplicated and submitted to state representatives and teacher educators for critical review. The materials will include three learning experiences, at a minimum, which will be sequenced as theory, practice, and application in the teaching role. They will be produced in a high quality format approved by the sponsoring states, Illinois, Ohio, and Pennsylvania. Once the research phase has been completed and prototype materials are available, other states will be recruited as additional sponsors. The findings from the national task verification will be examined in this paper.

Purpose of Research Project

The national task verification segment of this project is part of a larger project whose purpose is: (1) to examine the current context of professional development for teachers serving secondary and postsecondary students; (2) to examine the current teacher education curriculum in terms of the extent

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to which it is adequately preparing academic and vocational-technical teachers for their integrative instructional roles; and (3) to develop a series of exemplary instructional materials to meet the needs of preservice and inservice teacher preparation and staff development programs. The purpose of the national task verification segment, the focus of this paper, is to provide input for the preparation of modules or other instructional materials intended to meet preservice/inservice teacher preparation and staff development needs.

Objectives

The task verification survey was conducted to identify and verify classic and essential core competencies perceived to be needed by secondary and postsecondary teachers. The verified competencies will be used in the follow-on development of instructional materials intended to address new, high priority concepts such as vocational-academic integration, work-site learning, and authentic assessment as defined by the sponsoring states.

Research Questions

This study seeks to answer the following research questions:

1. What is the perceived relative importance of each aggregate set of tasks identified by the DACUM occupational analysis?
2. What is the perceived level of learning difficulty for each aggregate set of tasks?
3. What is the perceived relative level of overall criticality for each aggregate set of tasks?
4. What is the difference in perceived criticality of the aggregate sets of tasks among the four categories of teachers?

Methodology

A DACUM occupational analysis workshop was conducted to look specifically at the duties and tasks important to career related teachers. Following the identification of 13 duties encompassing 162 tasks, a national task verification survey was conducted. Three-hundred-thirty-three survey instruments were mailed to representatives from four target categories of educators in forty-one participating states. Of the 333 survey instruments mailed , 217 were completed and returned for a return rate of 65%. The four categories and their respective survey responses included: (A) Secondary Vocational Teachers and Postsecondary Vocational Instructors, n = 56, (B) Academic Teachers in an Occupational Setting, n = 22, (C) Business/Industry Trainer, n = 21, and (D) Administrators and Teacher Educators, n = 118. The 162 tasks associated with career related teachers were verified during the process. Comparison of criteria used in McLagan's Models for Excellence (1983) and the tasks was made. Task importance, task learning difficulty and the criticality of each task within the 13 duties were determined as part of the task verification. Respondents were asked to rate the importance of each task and the task learning difficulty on a 6-point Likert-type scale from 0 to 5, with zero being the least important/least difficult and five being the greatest importance/most difficult. Means and standard deviations are on duty averages. The competencies to be addressed through the teaching materials will be determined by state representatives, using the results of the occupational analysis, and the national task verification process. Duty variables were computed by averaging the task ratings for each duty. Task criticality was calculated by multiplying the rated task importance times the rated task learning difficulty. Duties include:

Duty A Develop Relationships with Business and Industry
Duty B Develop Program/Course Curriculum
Duty C Promote the Education/Training Program
Duty D Prepare for Instruction
Duty E Facilitate Instruction
Duty F Manage the Classroom/Laboratory

Duty G Assess Student Performance
Duty H Advise Students
Duty I Manage Tools, Equipment, Supplies, & Materials
Duty J Support Student Organizations and Activities
Duty K Maintain Course Effectiveness
Duty L Perform teaching-Related Activities
Duty M Continue Professional Development

Findings

Table 1 reflects the relative importance of each of the 13 duties (aggregate tasks) included in the survey and Table 2 reflects the relative difficulty to learn the aggregate tasks associated with their respective duties. The tasks included in Duty K, Maintain Course Effectiveness were perceived to be the most important of the 13 duties with a mean score of 4.61. The aggregate tasks in Table 1 are arrayed from most important to least important with the tasks relating to Duty L, Perform Teaching Related Activities, being perceived as least important of the 13 with a mean score of 3.45. The aggregate tasks in Table 2 are arrayed from those perceived to be the most difficult to perform to those perceived least difficult to perform. As reflected in Table 2, Duty K, Maintain Course Effectiveness, again had the highest mean score (3.57) of all 13 aggregate tasks. Therefore, it can be said that the tasks associated with maintaining course effectiveness were perceived to be the most difficult to perform while the tasks associated with Duty L, Perform Teaching-Related Activities, were perceived to be the easiest to perform with a mean score of 2.44.

Table 1 **Relative Aggregate Importance of Tasks (I)**

Rank	Duty Variable	DUTY	Mean	SD	n
1	**Duty K**	Maintain Course Effectiveness	4.61	.47	212
2	**Duty D**	Prepare for Instruction	4.38	.54	210
3	**Duty H**	Advise Students	4.35	.74	214
4	**Duty M**	Continue Professional Development	4.31	.57	213
5	**Duty B**	Develop Program/Course Curriculum	4.30	.51	194
6	**Duty E**	Facilitate Instruction	4.28	.52	192
7	**Duty G**	Assess Student Performance	4.27	.64	210
8	**Duty A**	Develop Relationships w/ Business & Industry	4.08	.66	203
9	**Duty I**	Manage Tools, Equip, Supplies, & Materials	3.95	.98	209
10	**Duty F**	Manage the Classroom/Laboratory	3.91	.66	200
11	**Duty J**	Support Student Organizations and Activities	3.86	.94	208
12	**Duty C**	Promote the Education/Training Program	3.84	.75	202
13	**Duty L**	Perform Teaching-Related Activities	3.45	.74	190

Table 2 **Relative Aggregate Degree of Task Learning Difficulty (d)**

Rank	Variable	DUTY	Mean	SD	n
1	**Duty K**	Maintain Course Effectiveness	3.57	.89	209
2	**Duty G**	Assess Student Performance	3.43	..82	197
3	**Duty D**	Prepare for Instruction	3.37	.75	204
4	**Duty A**	Develop Relationships w/ Business & Industry	3.33	.66	180
5	**Duty B**	Develop Program/Course Curriculum	3.29	..66	185
6	**Duty H**	Advise Students	3.12	.86	207
7	**Duty E**	Facilitate Instruction	3.11	.69	180
8	**Duty C**	Promote the Education/Training Program	2.92	.73	184
9	**Duty M**	Continue Professional Development	2.75	.85	199
10	**Duty J**	Support Student Organizations and Activities	2.67	.93	178
11	**Duty F**	Manage the Classroom/Laboratory	2.63	.70	196
12	**Duty I**	Manage Tools, Equipment, Supplies, & Materials	2.45	.94	202
13	**Duty L**	Perform Teaching-Related Activities	2.44	.74	167

Table 3 **Relative Criticality Rating of Tasks within Duties (l x d)**

Rank	Variable	DUTY	Mean	SD	n
1	**Duty K**	Maintain Course Effectiveness	16.48	4.59	208
2	**Duty D**	Prepare for Instruction	14.86	3.97	202
3	**Duty G**	Assess Student Performance	14.83	4.34	196
4	**Duty B**	Develop Program/Course Curriculum	14.28	3.35	180
5	**Duty H**	Advise Students	13.76	4.31	207
6	**Duty A**	Develop Relationships w/ Business & Industry	13.75	3.70	178
7	**Duty E**	Facilitate Instruction	13.39	3.46	176
8	**Duty M**	Continue Professional Development	11.94	4.02	199
9	**Duty C**	Promote the Education/Training Program	11.41	3.90	182
10	**Duty J**	Support Student Organizations and Activities	10.80	4.86	195
11	**Duty F**	Manage the Classroom/Laboratory	10.48	3.46	177
12	**Duty I**	Manage Tools, Equip, Supplies, & Materials	10.16	4.88	201
13	**Duty L**	Perform Teaching-Related Activities	8.69	3.55	162

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Table 3 shows the relative criticality rating of tasks within duties. Although rankings 2 through 12 show a somewhat different ranking for duty variables in Table 3, Duty K is still the top ranked variable and Duty L remains the lowest ranked variable, so it can be inferred that Duty K is the most critical and should be given the most weight during the development of course materials. Conversely, Duty L is thought to be the least important set of tasks and should be given the least weight of the 13 sets of tasks (duties). The duties were equally weighted during the analyses. Since criticality was computed by multiplying task importance (I) times task learning difficulty (d), and some instruments were incomplete, incomplete instruments were dropped in computing the overall criticality.

Table 4 **Summary of Survey Results** (Overall Criticality)

	Categories of Respondents	Count	Mean	Std Dev	Std Error
Group A	Secondary Vocational Teachers and Postsecondary Technical Instructors	21	11.7653	3.0899	.6743
Group B	Academic Teachers in an occupational setting	10	12.2849	2.5898	.8190
Group C	Business/ Industry Trainers	7	11.0793	2.4189	.9143
Group D	Administrators and Teacher Educators	49	13.9734	2.8740	.4106

In the summary table, Table 4, the means among the groups seem to vary. Group D had the highest mean and Group C had the lowest mean. The means were analyzed by ANOVA shown in Table 5. Tests for homogeneity of variances indicate that the variances did not differ significantly between groups. Therefore, the adverse impact of unequal cell sizes is minimal. As indicated in the table, we can reject the null hypothesis that all means of the groups were the same. To further investigate the differences between the group means, a post-hoc Tukey analysis was accomplished. The results indicate that Group A and Group D differ significantly.

Table 5 **Analysis of Variance (ANOVA)**

Source	df	Sum of Squares	Mean Squares	F Ratio	F Prob
Between Groups	3	109.3611	36.4537	4.4306	.0061
Within Groups	83	682.8973	8.2277		
TOTAL	86	992.2584			

Results/Conclusions

The differences among group means found in this study implies that groups differ in their judgment of task criticality in this investigation. This fact should most likely be taken into consideration as teaching materials are developed.

After the newly developed teaching materials undergo field reviews the data received will be summarized and used as a basis for further refinements. Programs will be based on competencies identified through research. Expected project outcomes will include programs based on competencies identified through research, professional development for the high-performance learning place, new materials that are field reviewed and proven effective, materials that address the cognitive, psychomotor and affective domains, programs that integrate theory and practice that are effective, efficient and consistent with high-quality teacher preservice and in service preparation, and high quality teachers. Better prepared teachers and students are expected as a result of this professional development effort.

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Profile of the Human Resource Development and Adult Education Professoriate and Perceived Dynamics Framing Program Integration

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This study presents a profile of the HRD and AdEd professoriate, describes the nature of the economic and organizational dynamics that may help to shape the direction of the two fields, and identifies the nature of organizational alliances that may serve to integrate these two fields. Preliminary results, observations, and factors to be considered in the successful integration between these two fields are discussed.

As higher education faces global competition, pressures to maintain economic viability, cutbacks in funding, and needs of "non-traditional" students, the fields of Adult Education and Human Resource Development are positioning to meet the challenge. In many institutions throughout the United States, AdEd and HRD faculty are integrating philosophically and organizationally. As integration occurs and academic alliances are formed, issues affecting career development of faculty are likely to emerge.

Colleges and universities have considerable control over institutional forces that affect faculty careers (Duderstadt, 1995; Elmore, 1995; Firestone & Pennell, 1993; Johnstone, 1994; Kalivoda, 1994) . According to Johnstone (1994), the size of faculty is being reduced, the size of classes is being increased, and institutions are operating under less state support. With pressure to educate students in less time, at less cost, and with better results, Johnstone (1994) claims the challenge is to do so while offering a rewarding career choice for faculty. Yet the rewards that traditionally have existed in an academic career may be threatened by program alliances that could alter the reward system.

Faculty vitality can be sustained through creating a climate supportive of values such as a commitment to teaching and respect toward students, and through initiating faculty development programs such as mentoring (Kalivoda, 1994). However, instilling values and developing programs may not be adequate to forge an effective alliance. Structural and organizational changes do not necessarily lead to changes in teaching, learning, or student performance; rather, changes in teaching and learning are mediated by such powerful factors as shared norms, knowledge, and skills of teachers (Elmore, 1995). This conclusion, while presented in the context of primary education, may be applicable to the professoriate and to higher education. The implication cited by Elmore is applicable as well: Reformers might focus on changing norms, knowledge, or skills, *before* changing the structure; i.e., one might identify what practices need to be in place in order for structures to work. Thus integration and the formation of departmental partnerships for the purpose of efficiency may be premature. Faculty issues regarding professional fulfillment and norms for performance may need to be addressed to determine the characteristics of the integrating faculty and their compatibility prior to initiating departmental mergers.

One alliance that appears to be increasingly common is the integration between the fields of Adult Education and Human Resource Development. Questions raised by such mergers are whether or not there are differences in the characteristics and professional fulfillment of the respective faculties and their perceptions regarding program integration. There have been a variety of national studies of faculty in higher education covering a wide range of fields (Baldridge, Curtis, Ecker, and Riley, 1978; Ladd & Lipset, 1976), as well as those specifically reflecting the adult education professoriate (Willie, Copeland, & Williams, 1985; Willie & Stecklein, 1982), and those drawing on regional differences (Eckert & Williams, 1972; Stecklein & Eckert, 1958). Other studies have examined such aspects of faculty as career choice, vitality, and productivity (e.g., Baldwin, 1990; Kalivoda, 1994; Sundre, 1992), or program characteristics and the nature of

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curriculum (Harrison, 1995). However, there have been no recent comparative demographic studies of the faculty who comprise the professoriate and none that address linking the fields of Adult Education and Human Resource Development.

A review of selected studies focusing on faculty demographics and satisfaction, identifies several national and local studies that provide some baseline data. Faced with academic retrenchment, inflation, unemployment, and shifts in student demands for programs, Ladd & Lipset (1976) surveyed 4,000 regular, full-time college and university faculty at 111 institutions regarding their career expectations, attainments, and aspirations, and their opinions on issues facing higher education, and on social and political questions facing the nation. Baldridge, Curtis, Ecker, and Riley (1978) surveyed more than 9000 college and university faculty members to address the issue of morale. Local studies, namely Eckert and Williams (1972) and Stecklein and Eckert (1958) had not been replicated until Willie & Stecklein (1982) randomly sampled full-time faculty in Minnesota's accredited non-theological colleges and universities. Results from 772 men and 277 women (66.8%) were compared to the earlier studies. Based on questions regarding the nature of Minnesota college teachers, the professional endeavors in which they spend their time, and career satisfaction, it was concluded that the professoriate had remained relatively unchanged except that their educational level had risen. Faculty in Minnesota continued to find their careers satisfying, and most would make the same career selection again.

For comparative purposes, the instrument used in the 1982 study was adapted and the study conducted on a national scale. Willie, Copeland, & Williams (1985) sampled active professors of adult education in American and Canadian colleges and universities who held membership in the Commission of Professors of Adult Education. Preliminary results obtained from 146 men and 31 women (82.3% response) indicated that middle-aged and older men continued to comprise the bulk of the faculty, and that the median age continued to increase. The researchers predicted that Adult Education programs would change very little over the next decade. After all the responses were in (N = 215), Willie & Williams (1986) reported that only 38 (17.5%) were women. There were no gender differences in the amount of time spent on various activities, interest in research and writing, productivity, or career satisfaction. However, the women were younger and of lower rank than their male counterparts. Based on that finding, the authors now predicted that as men retire, their jobs would be filled by women who may come with different interests and thus may introduce new directions for the field.

The current study evolved based on the need to identify the feasibility of the current practice suggesting a trend toward academic integration between the fields of Human Resource Development and Adult Education. Thus the objectives of this study were to: (a) Profile the Human Resource Development and Adult Education professoriate and determine similarities and differences between them, (b) describe the nature of the job and the factors that contribute to the professional fulfillment of the faculties, and (c) identify some economic and organizational factors that contribute to the integration between the fields of Human Resource Development and Adult Education.

Specifically, the research questions were as follows:

1. What characteristics profile the current Human Resource Development and Adult Education professoriate?
2. What factors contribute to satisfaction and professional fulfillment of the Human Resource Development and Adult Education professoriate?
3. Are there differences in characteristics and the level of professional fulfillment between Human Resource Development and Adult Education professors?
4. What contributing factors are shaping the formation of departmental alliances between Human Resource Development and Adult Education programs?
5. What relationships exist between organizational and economic factors and the professional fulfillment of the faculty in the fields of Human Resource Development and Adult Education ?

Methodology

To develop a profile of the Human Resource Development (HRD) and Adult Education (AdEd) professoriate, identify factors that contribute to their professional fulfillment, and identify the perceived dynamics framing program integration, a survey of faculty was conducted. Following is a description of the population and sample, instrumentation, and procedures used in the study.

Population and Sample. A review of the various associations to which AdEd and HRD faculty were likely to belong identified two predominant organizations. The most widely recognized professional association for HRD faculty is The Academy of Human Resource Development. The most widely recognized professional association for AdEd faculty is The Commission of Professors of Adult Education.

In October, 1995, surveys were sent to all faculty members of the Academy of Human Resource Development (N=156) and to all members of the Commission of Professors of Adult Education (N=254). The initial response and telephone follow-up efforts identified faculty for whom the questionnaire did not apply due to changes in professional status, reducing the sample to 127 faculty in HRD and 214 faculty in AdEd, for a total of 341.

Preliminary response rates after the initial mailing and personal phone calls have yielded a 32.3% response from HRD faculty (N=41) and a 44.9% response from AdEd faculty (N=96), for a total response rate of 40.2% (N=137) to date. Aggressive follow-up procedures continue to be in process. A second survey has been faxed to all members who had not previously responded and for whom fax numbers were available; surveys were re-mailed to all other members who had not previously responded and for whom a fax number was not available. This paper reports the preliminary results based on analysis from 137 faculty respondents. Complete and validated results, inclusive of data obtained through exhaustive follow-up efforts, will be reported in future publications.

Instrumentation. The survey, entitled *The Adult Education and Human Resource Development Professoriate*, was divided into six sections: Section I: Demographic Data, Section II: Education and Experience, Section III: Present Position, Section IV: Organization and Economic Influences, Section V: Influences on Curricular Design and Research (not addressed in this paper), and Section VI: Professional Fulfillment. Responses to questions in Section IV: Organization and Economic Influences were based on a five-point Likert Scale ranging from Strongly Disagree (1) to Strongly Agree (5). Responses to questions in Section VI: Professional Fulfillment were based on a five-point Likert Scale ranging from Very Dissatisfying (1) to Very Satisfying (5). An open-ended question was asked to identify whether or not programs were in the process of being realigned or had recently realigned with other programs within the institution and the nature of that realignment. Most of the demographic questions were categorical, and some were open-ended.

Procedure. To develop a demographic profile, simple descriptive statistics were used to identify frequency distributions and means where applicable. Data were analyzed separately for Adult Education (AdEd) and for Human Resource Development (HRD), as well as aggregately. To identify factors which contribute to the satisfaction and professional fulfillment of the HRD and AdEd professoriate, means and sum of frequencies indicating satisfaction or dissatisfaction were obtained. Differences in characteristics and the level of professional fulfillment between Human Resource Development and Adult Education professors, was analyzed using a series of one-way Analysis of Variance (ANOVA) procedures. Means and sum of frequencies indicating agreement or disagreement were obtained. To identify the nature of program integration efforts, responses to an open-ended question were analyzed using a qualitative approach. If the respondent wrote comments, the comments were recorded and analyzed to interpret the nature of the alignment. In addition, means and sum of frequencies indicating agreement or disagreement relevant to organizational and economic influences on alignment were obtained. A correlation matrix was developed to identify relevant relationships that existed between professional fulfillment and organizational and economic factors influencing the fields of AdEd and HRD.

Results and Discussion

The research questions are addressed within the following categories: Profile of the Professoriate describes faculty demographics and the nature of the job, Professional Fulfillment describes sources of satisfaction and dissatisfaction, and Program Integration describes alliances between Human Resource Development and Adult Education, and the relationship of organizational and economic factors to satisfaction.

Profile of the Professoriate. Demographic data describing the Human Resource Development (HRD) and Adult Education (AdEd) professoriate are presented in Table 1. The 1985 prediction that AdEd teaching positions would be filled by women as men retire appears to have been accurate. In the Willie, Copeland, & Williams study (1985), 82% of the faculty of Adult Education were male which was consistent at that time with other studies-- the Ladd & Lipset study (1976) reported 79% male, and the Willie and Stecklein study (1982) reported 74% male. Preliminary results obtained in the current study show that men comprise 64% of the faculty. While the professoriate is still predominantly male, more women are gaining entry to the field. The two fields are nearly identical in their gender distribution.

The 1985 study also predicted that the median age (47.6 in 1985) would continue to rise. While age was reported categorically in the present study, it is safe to confirm that the prediction holds true, as only 16% of the professoriate is younger than 45, and nearly one-third are 55 or older. However, HRD faculty are younger than AdEd faculty, with 22% reporting their age as younger than 45 and only 29% reporting their age as 55 or older. This trend seems reflective of the emerging nature of the HRD field.

Rank appears to be reflective of age: In 1985, 22% of the faculty were assistant professors, 35% were associate professors, and 43% were full professors. In 1995, 21% of the faculty are assistant professors, 31% are associate professors, 38% are full professors, and 10% hold some other title, most commonly adjunct. HRD faculty respondents as a whole reported lower ranks, consistent with their younger age.

Salary appears to be reflective of both age and rank, with the highest salaries reported among the AdEd faculty. However, institutional base salary is not the only source of income. Institutional base salary represents 83% of the total income for AdEd faculty, 27% of whom hold 12-month appointments, while it represents only 75% of the total income for HRD faculty, only 18% of whom hold 12-month appointments. It appears that HRD faculty, more so than AdEd faculty, cultivate other sources of income, primarily consulting. Consulting activities represented 13% of HRD faculty income and only 7% of AdEd faculty income. In 1986, 35% of faculty held 12 month appointments, but the current study indicates that this academic appointment may be on the decline.

The final element in Table 1 summarizes time spent on professional activities. For the AdEd faculty, this allocation of time can be compared to the 1985 study. In 1985, teaching represented 40% of the faculty's time, advising 15%, research and writing 10%, counseling 10%, committee and administrative duties 10%, off-campus service 5%, and other activities 10%. The current study indicates for AdEd faculty a reduction in time spent teaching and service to the community and an increase in the time spent on research and writing, and administrative duties and committee work. The time spent advising is about the same. There may be differences in time spent on various professorial activities between the AdEd and HRD faculty; statistical tests to identify those differences will be conducted and included in the final analysis (forthcoming).

Interestingly, the activity to which faculty would prefer to devote less time was committee work, even though this activity comprised only 5.2% of HRD faculty time and 6.1% of AdEd faculty time. When queried on the activity to which they would prefer to devote more time the overwhelming response was scholarly writing and research and evaluation. These activities were chosen by 64% of the AdEd respondents and 67% of the HRD respondents. In 1985, 69% of AdEd faculty wanted to devote more time to research and writing and 23% to teaching; 56% wanted to devote less time to committee and administrative assignments and 12% wanted to devote less time to teaching.

Table 1
Demographic Profile of Respondents

		HRD % (N=41)	AdEd % (N=96)	Total % (N=137)
Gender				
	Male	63.4	64.6	64.2
	Female	36.6	35.4	35.8
Age				
	25-34	0	0	0
	35-44	22.0	13.5	16.1
	45-54	48.8	52.1	51.1
	55-64	24.4	29.2	27.7
	65 +	4.9	5.2	5.1
Rank		(N=41)	(N=95)	(N=136)
	Assistant Professor	31.7	16.8	21.3
	Associate Professor	19.5	35.8	30.9
	Full Professor	34.1	40.9	38.2
	Other	14.6	7.4	9.6

Institutional Base Salary

	HRD % (N=39)	AdEd % (N=95)	Total % (N=134)
Under $25.0	0	1.1	.7
$25-34.9	10.3	4.2	6.0
$35-44.9	33.3	22.1	25.4
$45-54.9	33.3	25.3	27.6
$55.0-64.9	7.7	23.2	18.7
$65.0-74.9	10.3	11.6	11.2
$75.0-84.9	2.6	9.5	7.5
$85.0 +	2.6	3.2	3.0

Number of Mo. in Appointment

	HRD x (N=41)	AdEd x (N=96)	Total x (N=137)
1-6 months	0	1.0	.7
7-8 months	2.6	0	.7
9 months	64.1	54.2	57.0
10 months	15.4	7.3	9.6
11 months	0	7.3	5.2
12 months	17.9	30.2	26.7

Source of Income

	HRD x (N=41)	AdEd x (N=96)	Total x (N=137)
Institutional Base salary	75.0%	83.3%	80.8%
Other institutional inc.	7.0	7.0	7.0
Consulting	12.8	4.1	6.7
Publishing	1.4	.9	.4
Residuals & honoraria	.2	.4	.4
Grants	1.3	4.1	3.3
Other	2.3	1.3	1.6

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Table 1 continued

Time spent on professorial functions

	HRD $\bar{x}$ (N=41)	AdEd $\bar{x}$ (N=96)	Total $\bar{x}$ (N=137)
Teaching activities	40.6%	33.5%	35.6%
Research and writing	15.6	17.6	17.0
Advising	11.5	15.3	14.1
Administrative duties	10.2	14.8	13.5
Committee Work	5.2	6.1	5.8
Consulting	7.7	3.0	4.4
Service-academic	3.5	3.6	3.5
Service-community	2.5	3.5	3.2
Professional Devp.	3.6	2.2	2.6

Professional Fulfillment. Sources of satisfaction and dissatisfaction among the professoriate of Human Resource Development and Adult Education are presented in Tables 2 through 4. The HRD and AdEd faculty are a satisfied lot, with relatively no difference between them-- 94% reported that overall they were satisfied with their career, and 86% would choose to become a professor in their field if they had it to do over again. In 1985, 87.5% of AdEd faculty reported overall satisfaction. There were no significant differences in professional fulfillment when respondents were grouped by age. While there were some differences when respondents were grouped by gender, the results were interpreted as uninteresting, indicating a degree of neutrality or satisfaction on the same side of the Likert scale.

There were significant differences in the mean responses between the two fields in only four of the 23 items measuring professional fulfillment. Except for one item, the differences were interpreted as uninteresting, indicating a degree of neutrality or satisfaction on the same side of the Likert scale. The exception, satisfaction with organizational and administrative support, identified a clearer split between the fields. Table 2 identifies the means for both groups, and the combined percentage of the respondents who were dissatisfied or very dissatisfied, or the combined percentage of the respondents who were satisfied or very satisfied.

In 1985, satisfaction (based on ranking as opposed to the Likert scale used in the present study) was derived from students, interesting work, opportunities for research and writing, and opportunities for teaching. Among the AdEd faculty, however, that study indicated a significant difference between the Canadian and American professoriate regarding research and writing which was ranked first by 38% of Canadian professors and first by 7% of American professors. In the present study, research and writing were found to be satisfying or very satisfying by 72% of HRD and 77% of AdEd faculty, but it did not rank among the top five for either field. Table 3 summarizes sources of satisfaction.

In 1985, dissatisfaction (based on ranking as opposed to the Likert scale used in the present study) was derived from research pressures, inadequate resources, administration, and poor administrative support. The current study indicates that perceptions of organizational and administrative support have not improved; in fact, it should be cause for concern that, according to the preliminary results, nearly half of the HRD faculty and one-third of the AdEd faculty find organizational and administrative support dissatisfying or very dissatisfying. Furthermore, half of the AdEd faculty and nearly one-third of HRD faculty find interactions with the administration to be dissatisfying or very dissatisfying. Table 4 summarizes sources of dissatisfaction.

Table 2
Professional Fulfillment

	HRD			Adult Education		
	$\bar{x}$	% dissatisfied or very dissatisfied	% satisfied or very satisfied	$\bar{x}$	% dissatisfied or very dissatisfied	% satisfied or very satisfied
1. Interactions with students	4.5		95.	4.7		98.9
2.* Interactions with other faculty (p=.029)	3.9		77.5	4.2		85.3
3. Conducting research and writing	3.9		71.8	4.1		76.8
4. The challenge of publishing	3.5	25.0	55.0	3.6	17.9	57.9
5. Teaching	4.5		100.0	4.6		97.9
6. Engaging in service to the academic community	3.8		70.0	3.6		60.0
7. Engaging in service to the broader community	4.0		70.0	3.9		66.8
8. Working in an intellectual environment	4.3		87.2	4.4		92.6
9. Working in a collegial environment	4.0		67.5	4.2		83.1
10. Working in a nurturing environment	3.7		40.0	3.8		63.2
11. Opportunity to assume a leadership role	4.1		74.4	3.9		73.7
12.* The field (p=.000)	4.6		94.6	4.0		75.0
13. Interactions with the administration	2.8	29.2	3.1	50.0		
14. Administrative responsibilities	2.6	37.5		2.7	45.6	
15.* Working conditions (p=.030)	3.0	30.0	32.5	3.5	19.4	54.8
16. Salary package	2.9	32.5	27.5	3.1	33.0	44.6
17.* Organizational and administrative support (p=.005)	2.6	47.5	20.0	3.2	30.8	45.7
18. Overall organizational climate	3.0	33.1	33.4	3.1	33.7	42.1
19. Prestige of the position	3.4		50.0	3.5		55.8
20. Prestige of the institution	3.5		52.5	3.5		54.2
21. Being a mentor	4.1		85.0	4.3		85.3
22. Having a mentor	3.0	20.5	17.9	3.3	17.9	35.8

* = Significant difference between the fields

Table 3
Top five sources of professional fulfillment, based on the percentage of faculty in HRD and Adult Education who found that item satisfying or very satisfying

HRD		Adult Ed	
Item	%	Item	%
Teaching	100	Interactions with students	99
Interactions with students	95	Teaching	98
The field	95	Working in an intellectual environment	93
Working in an intellectual environment	87	Being a mentor	85
Being a mentor	85	Interactions with faculty	85

Table 4
Top five sources of dissatisfaction, based on the percentage of faculty in HRD and Adult Education who found that item dissatisfying or very dissatisfying

HRD		Adult Ed	
Item	%	Item	%
Organizational and administrative support	48	Interactions with administration	50
Administrative responsibilities	38	Administrative responsibilities	46
Overall organizational climate	33	Overall organizational climate	34
Salary package	33	Salary package	33
Interactions with administration	30	Organizational and administrative support	31
Working conditions	30		

Interestingly, while 100% of the HRD faculty derive satisfaction from teaching, 28% indicated a preference for devoting *less* time to teaching. The mean time spent teaching was 40.6%. Ironically, 15% indicated a preference for devoting *more* time to teaching. Among the AdEd faculty, the mean time spent teaching was 33.5%. Of these faculty, 98% derive satisfaction from teaching; while 8% indicated a preference for devoting *less* time, 10% indicated a preference for devoting *more* time to this activity.

Aspects of professional fulfillment are positively correlated with several organizational and economic influences discussed in the next section. However, the only relationships of both statistical and practical significance were related to only one organizational dimension: Seeking alliances with other programs within the institution. This dimension was correlated with the overall organizational climate (r^2=.18; p=.042), working in a collegial environment (r^2=.23; p=.007), and working conditions (r^2=.17; p=.049). While the correlations are slight, ranging from .17 to .23, they are both statistically and practically significant and worthy of some analysis. It is logical that programs operating in a collegial environment, under satisfying working conditions, and within an overall satisfying organizational climate may be more likely to engage in forming collegial partnerships. On the other hand, the slight correlations could be indicative of a perceived threat that merger activity could pose to a collegial and satisfying environment.

Program Integration. In Section IV of the survey, Organizational and Economic Influences, three questions were intended to represent the propensity toward organizational alignment within one's institution. While there are a number of organizational and economic factors that help to shape the direction of the HRD and AdEd fields, these three questions reflect the feasibility of integration as a means for maintaining economic viability and responsiveness to student needs, particularly in light of economic considerations driving staffing and tenure decisions. Responses to these questions are summarized in Table 5.

A larger percentage of the AdEd faculty agreed or strongly agreed (77%) that their programs actively seek alliances than the HRD faculty (69%). While the difference is not statistically significant, it is consistent with data gathered in the open-ended question discussed

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below. Slightly over half of the respondents in both fields indicated that staffing and tenure decisions were influenced by economic considerations. However, the only significant difference in the response of HRD and AdEd faculty was in the area of student enrollment. As a field, HRD appears to be attracting more new graduate students than the field of AdEd. This finding is consistent with the tendency for AdEd faculty to report a greater propensity for integration.

Table 5
Organizational and Economic Influences

	HRD		Adult Education	
	x	% agree or strongly agree	x	% agree or strongly agree
1. My program actively seeks alliances with other academic programs within the institution.	3.7	69.2	3.9	77.1
2. Economic considerations have driven recent staffing and tenure decisions in my program	3.4	59.0	3.5	56.2
3. * The number of students entering our graduate programs has increased in the past 5 years. (p=.005)	4.3	86.8	3.7	69.6

The open-ended question was intended to identify the extent to which program realignment had altered or was in the process of altering the organizational structure of HRD and AdEd, and supplemented the findings identified in Table 5. Responses indicated alignment activity; yet, the integration between AdEd and HRD was not as prevalent as expected. Although responses from the AdEd faculty tended to indicate a greater movement toward alignment with HRD than indicated by HRD faculty, they also indicated alignment with other programs, such as educational psychology and continuing studies. HRD programs indicated alignment with, in addition to AdEd, such programs as business administration, counseling, industrial technology, and instructional systems. Alignment between HRD and AdEd was primarily at the graduate level. Both faculties indicated movement away from or closure of departments titled Vocational Education.

Conclusions and Recommendations

This study was conducted to: (a) Profile the Human Resource Development and Adult Education professoriate and determine similarities and differences between them, (b) describe the nature of the job and the factors that contribute to the professional fulfillment of the faculties, and (c) identify some economic and organizational factors that contribute to the integration between the fields of Human Resource Development and Adult Education. While the results reported are preliminary, tentative conclusions can be drawn from the demographic data, and comparisons can be made between the two fields and, for the field of Adult Education, between the present study and previous studies.

One objective was to identify differences, if any, between the Adult Education (AdEd) and Human Resource Development (HRD) faculty. The two faculties appear to be quite similar, except for age, rank, and concomitant salary. There were few differences between the faculty in terms of professional fulfillment and their perceptions regarding economic and organizational influences. The simi.arities may be indicative of the compatibility between the two faculties, and could be interpreted as conducive to the formation of effective alliances. Indeed, there are a number of alliances being formed between AdEd and HRD faculty, and alliances with other academic programs surfaced, as well. Several economic and organizational factors appear to have shaped the formation of departmental alliances. There was a greater propensity for AdEd programs to seek academic alliances, which may be related to a perceived need to maintain economic viability.

However, further research and more thorough analyses are required before such an interpretation can be fully justified. Likewise, more thorough analyses are needed regarding the extent of integration between the fields of AdEd and HRD, and the relationships between economic and organizational perceptions and professional fulfillment. Nevertheless, we conclude that while academic alliances are not likely to be the only actions taken to address economic and organizational issues, the compatibility of the faculty, their characteristics, and the impact of these alliances on their professional fulfillment need to be considered prior to initiating these partnerships.

The data presented in this paper are based on preliminary responses to a survey for which follow-up efforts are still underway. Additional responses will be incorporated and further analyses conducted to more thoroughly respond to the research questions posed in this paper. It is intended that this study be replicated every three years in order to keep a pulse on issues that affect the HRD and AdEd professoriate, particularly since "the only way an institution can remain vital over time is for its faculty members to be provided opportunities for remaining vital over the career-span" (Kalivoda, 1994, p. 26).

In 1985, it was predicted that Adult Education programs would change very little over the next decade. For the field of AdEd, this and future studies can be compared to draw comparisons between the nature of the professoriate and identify implications that organizational and economic influences have had and will continue to have on the direction of the field.

The field of HRD is emerging and several economic and organizational factors have the potential for guiding its direction. The focus of a field is informed by its faculty and their experiences. Insight into the characteristics and professional fulfillment of faculty will have an impact on future alliances, whether of an academic or broader nature. In describing the growing complexities of the modern research university, it has been suggested that "faculty members of the 21st century could well be asked to set aside their roles as teachers to become designers of learning experiences, processes, and environments" (Duderstadt, 1995, p. 5). The data gathered in this study provides a foundation for future comparative studies regarding the dynamics needed to address the inevitability of forging new relationships and alliances.

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An Exploration of the Type of Research Appearing in the AHRD Conference Proceedings.

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The Academy of Human Resource Development's mission is to advance the field of HRD through the systematic study of human resource development theories, processes and practices. This paper reviews and classifies the types of research that have appeared in the AHRD conference proceedings for 1994 and 1995.

One theme that continually emerges from academicians within Human Resource Development is that the field is desperately in need of more theory building and research that is based upon sound scientific and methodological principles (Watkins, 1990). Argument is quite lively over whether that research should be based in the empiricist/positivist tradition or in the interpretivist/phenomelogical one (Marsick, 1990), but there appears to be some agreement that whatever paradigm is taken, it needs to be rigorously pursued (Passmore, 1990). This presents quite a dilemma for most within HRD as they struggle between practical relevancy and scientific relevancy. This, of course, is a problem with which almost all applied fields have to struggle.

Nonetheless, there appears to be a concerted effort within HRD to gain more credence as a discipline that can pass muster when it comes to scientific integrity. Perhaps some of the best expressions of this effort take the form of more research outlets for publishing that have the stated mission of advancing the scholarly nature of HRD. The creation of the Human Resource Development Quarterly, born out of the Research Committee of the American Society for Training and Development, was perhaps one of the first attempts at this ennobling goal. As Swanson (1990) put it, "Many of us see HRDQ as the start of a community of HRD scholars. I believe that this research quarterly will provide the intellectual footing and research credibility HRD requires to mature as a field of study and practice."

The Academy of Human Resource Development (AHRD) was also developed with the express purpose of advancing the field of HRD through "the systematic study of human resource development theories, processes and practices..." (Holton, 1995). Indeed, the requirements for the papers presented at the AHRD annual conference are: a) a problem statement and theoretical framework, b) research questions and/or hypotheses, c) an expressed methodology, and d) results and conclusions (Holton, 1995). Obviously, the goal of this conference is to promote sound research within the field of HRD. The purpose of this paper is to explore the types of research that is being conducted by those who have had papers accepted by the annual AHRD conference from 1994 to 1995. What will emerge is a snapshot over those two years that reflects the state of research within the field.

Methodology

In order to explore the state of research within AHRD, the 1994 and 1995 AHRD conference proceedings papers were read and classified into the type of research on which they were based. The classification scheme was in part adapted from Pedhazur and Schmelkin (1991) and consisted of the following categories:

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I. ***Library Research/Speculative*** - General observations and/or speculation based upon other sources, personal observation and personal opinion. There are no researchable models *explicitly* offered and *no data analysis* (either qualitative or quantitative) is conducted. This would include exploratory papers in which one integrates, synthesizes and expands upon the work of others in an effort summarize or generate new ideas.

II. ***Descriptive Case or Field Study*** - An in-depth examination of a single entity or a group of entities as they occur naturally in the field (e.g., businesses, trainees, etc.). This research is descriptive and can be based upon quantitative analysis, qualitative analysis, or a combination of the two. This category includes descriptive surveys, case studies, ethnographic studies, etc. There is no experimental method present, i.e. there is no manipulation of treatments and there is no random assignment of subjects to different levels or categories of treatments (Pedhazur and Schmelkin, p.251).

III. ***Field or Laboratory Experiment*** - This category includes true experimentation in which there is manipulation of treatments and there is random assignment of subjects. It also includes quasi-experimental designs in which there is manipulation of treatment conditions but there is no random assignment of subjects (Pedhazur and Schmelkin, 1991). It is important to note that this definition of quasi-experiment has been selected arbitrarily, as there is no consensus concerning what exactly qualifies as a treatment (e.g., Cook and Campbell, 1979). Another requirement for this category is that measures be taken on some criterion variable and those measures be analyzed across treatments.

IV. ***Theoretical Model or Instrument Construction***- A model or instrument is posited based upon previous research or original ideas *that is in principle testable*. This is not to be confused with a classification scheme in which no relationships are posited between categories or constructs. The model must consist minimally of operationally definable concepts or variables as well as the hypothesized causal relationships among those variables (Dubin, 1978). Instruments must consist of operationally defined constructs that permit measurement.

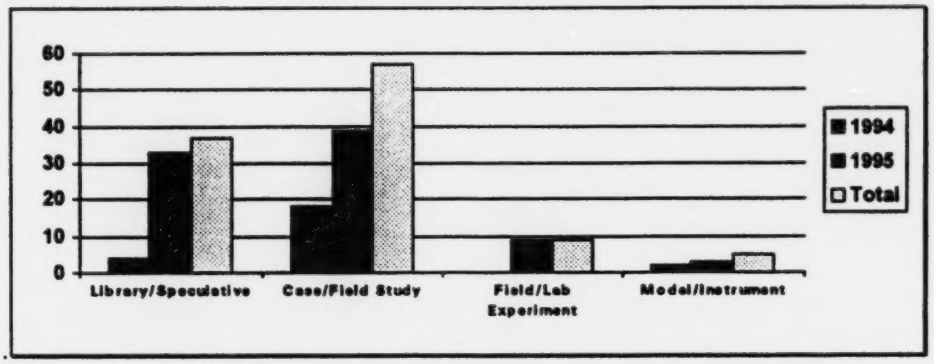
All articles were read by two graduate students in HRD and placed into the appropriate categories. Any discrepancies between classifications were discussed until consensus was reached. The classification was very conservative. If an article was 90% library research but included some field data, then that article was classified in the "Field Study" category. In general, all articles were classified into a particular category if there was any content at all (no matter how small) to support that classification. There was no discrimination as to whether the data presented was qualitative or quantitative. So, for example, a "Field Study" was classified as such regardless of whether the data reported were qualitative or quantitative. All that mattered is that the researcher went out into the field and systematically collected data.

A decision was made to exclude from this study certain articles that belonged to non-research oriented symposia, symposia for which papers were not printed in the proceedings, and articles that described work in progress. For the 1994 proceedings, this included the article by DeJong and Versloot. For 1995, these included articles in "HRD in China" (symposia 6), "Research Centers: Ecstasies and Agonies" (symposia 19), "Advancing the Profession Through Journals: The Editor-Author-Profession Partnership" (symposia 21), and "Issues in Case Study Research in HRD" (symposia 25). Additionally, article 5-3, "Leadership Development of Physician Executives" and article 24-4, "Validating a Check Sheet as a Guide for High-Involvement Training," were excluded because the articles outlined research that was in progress.

Results

A total of 108 articles were classified, 24 from 1994 and 84 from 1995. The breakdown of articles into research type is shown below (Fig. 1)

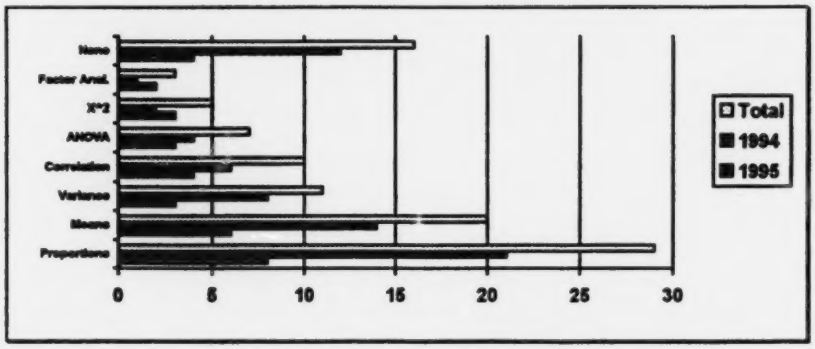
Figure 1. Classification of Articles for 1994 and 1995



The most frequent article types in both years was "Descriptive Case or Field Study" (18 articles [75%] for 1994; 39 articles [46.4%] for 1995), followed by "Library Research/Speculative" (4 articles [16.7%] for 1994; 33 articles [39.3%] for 1995), "Field or Laboratory Experiment" (0 in 1994; 8 articles [9.5%] for 1995) and "Theoretical Model or Instrument Construction" (2 articles [8.3%] for 1994; 3 articles [3.6%] for 1995).

An attempt was made to probe further into the type of tools used in this research, both quantitative and qualitative. All experimental studies were necessarily quantitative since the requirements were that statistical techniques be used to measure differences between control and experimental groups given some experimenter controlled treatment condition. The case or field studies, however, could have been based on either qualitative or quantitative methods. In order to explore further the type of research techniques used, an analysis was conducted to classify the quantitative and qualitative methods that were employed in these case and field studies. The results are presented below (Fig. 2).

Figure 2. Breakdown of Quantitative Methods



Looking at both years, quantitative methods were employed in 71.9% (41 out of 57) of all case or field studies examined. Of the 41 that used a quantitative methodology to describe data, the overwhelming majority relied on rather simple measures such as proportions, means and variance (e.g. standard deviation). Only 5 articles used correlation or regression analysis, and only 3 used ANOVA (analysis of variance).

Sixteen articles within the descriptive case or field studies classification used no quantitative methodology and relied on qualitative approaches. These articles were further scanned to determine what qualitative research methods were employed in the compilation of the data reported. No research method

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was specified in four of the articles. Within the remaining 12 articles, 10 different research methods were reported. Below is a listing of those cited methodologies.

- Action Research
- Analytic Paradigm
- Naturalistic Inquiry
- Focus Group Discussion Format
- Ethnographic Perspective
- Action Science
- Exploratory Qualitative Study
- Qualitative Descriptive Case Study Method
- Organizational Anthropology
- Organizational Stories Analysis

Discussion of Results

There is a continuing debate within HRD as to what the appropriate avenue of research is, given the inherently complex and chaotic nature of the entities under study, e.g. organizations, human beings, systems, etc. Unfortunately, this debate frequently deteriorates into opposing camps which are based on false dichotomies. These dichotomies traditionally revolve around qualitative versus quantitative approaches and interpretive versus positivist approaches.

At the present, most researchers agree that there is utility in all of these approaches. Depending on the questions one asks, and depending on the nature of the observation and measurement available, the research methods employed will vary across circumstances. It is not that one approach is better than another in all cases, but one approach may be better suited for a particular problem than the other.

As a community of scholars, however, there ought to be consensus surrounding at least a few issues. First, that knowledge is built through the *systematic* observation and interpretation of data in our world. Second, that theories concerning cause and effect relationships between variables should be tested for validity. Last, the results of these activities should be disseminated expediently through the community of scholarship and practice. All of these statements are value neutral with respect to the qualitative/quantitative and positivist/interpretive debate. Lest one think that these issues appear slanted towards positivism, remember that interpretivist methods demand just as much rigor in their collection and interpretation as positivist ones.

Almost 43% of the articles examined within the AHRD conference proceedings for both years were based on library research alone or were speculative in nature. Certainly, such work has its place and is useful for many reasons. But is this proportion appropriate for a forum whose mission is to further knowledge and research within HRD? The HRD community of scholars should take it upon itself not only to continue to think and create ideas concerning the development of the human resource, but also take just as seriously the systematic observation and interpretation of data that new knowledge is built upon. If HRD is to be taken seriously by either industry or academia, then it must fulfill the obligation to increase the foundation of knowledge in a rigorous and credible manner.

Conclusion

The mission of the Academy of Human Resource Development is to advance the field of HRD through "the systematic study of human resource development theories, processes and practices..." AHRD has served an integral role in moving HRD from a field of fads to a field of theory and informed practice. The Academy must continue this noble goal as a community of scholars. Only as a community will this mission succeed.

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Identifying Core Journals for HRD Research: Process and Results*

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This research identified the core professional journals that published HRD research during the fifteen-year period from 1980 through 1994. Using the research methodology of citation analysis and specific delimiters resulted in identifying 258 journals that have published 1,290 refereed HRD research-related articles. It also resulted in a list of 18 journals that have published more than 15 articles in the time period.

During its short history, the human resource development (HRD) field has grown dramatically to address the learning and performance needs of individuals, work groups, and organizations. One strategy for quickly advancing a young field, particularly an interdisciplinary field such as HRD, is to draw heavily on knowledge and work from other fields. Jacobs (1990) noted that HRD has relied on five major bodies of knowledge: education, psychology, systems theory, economics, and organizational behavior. A mature field, however, has a recognized body of scientific work and literature that guides practice and provides a basis for further developing theory and research. As Dorelan (1988) pointed out scientific work provides a foundation for a discipline and its specialties.

Many writers have noted the development of HRD as a field. For example, Gilley (1989) stated that during the past two decades, HRD has emerged as a professional field in its own right. Watkins and Willis (1991) defined HRD as a field of study and practice and stated that "it seems to be time for the field to move on to more theory development and the development of a distinct body of knowledge" (p. 92). Jacobs (1990) pointed out that, "HRD constitutes a unique body of knowledge and research derived from more fundamental disciplines" (p. 66). However, he also reported that little has been written about this unique body of research.

As Fox (cited in Dorelan, 1988) pointed out, publication is central to productivity in research such that work becomes *a work* only when it is published. Further, as Dorelan noted, "a substantial portion of scientific work is published in professional journals, the set of which can be viewed as a central institution of science" (p. 79). Identifying the professional journals that publish HRD research is the purpose of this study. As with all studies, the research methodology influenced the results.

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Research Methodology

Citation analysis provides a systematic way to examine a specific subject area. For example, Lowenthal (1990) used citation analysis to examine human performance technology, and Alavi and Carlson (1992) used it to examine management information.

Similar to other types of disciplined inquiry, a citation analysis must be delimited with clearly specified assumptions and limitations. The delimiters for this study were the citation sources, the search terms, the types of publication, the year of publication, and the definition of HRD. The decisions relative to each delimiter established boundaries for the study and, therefore, are detailed in the following paragraphs.

The first delimiter of the study was the citation sources. The sources used in citation analyses vary. The research can involve scrutinizing citations from one journal (e.g., Garfield, 1992) or it can focus on citations from a selection of journals (e.g., Hamilton & Ives, 1992). Because the purpose of this study was to examine the diverse field of HRD research literature, the investigators decided that the sources for citations should extend beyond a single journal and even beyond a small selection of journals. The availability of electronic databases that identify and abstract citations provided a means for efficiently extending the analysis. The authors decided that Educational Resources Information Center (ERIC), Abstracted Business Inform (ABI/Inform), and PsycLit, three electronically available data bases, would include many articles related to human resource development research, and at a minimum, would cover all of the fields identified by Jacobs (1990).

The second delimiter of the study was the search terms used to select citations from the databases. The choice of terms reflected key elements of HRD definitions. McLagan (1989) defined HRD as the "integrated use of training and development, organization development, and career development to improve individual, group, and organization effectiveness" (p. 7). Swanson (1994) defined HRD as a process of developing and/or unleashing human expertise through organization development and personnel training and development for the purpose of improving performance. Watkins (1989) defined HRD as "the field of study and practice responsible for the fostering of a long-term, work-related learning capacity at the individual, group, and organizational levels. As such it includes—but is not limited to—training, career development, and organization development" (p. 427). Nadler and Nadler (1989) defined HRD as "organized learning experiences in a given period of time to bring about the possibility of performance change and/or personal growth" (p. 4). Based on these definitions, the search terms for HRD included human resource development, human resource, training, management development, organization development, and career development. Because the study focused on HRD research, each search term was combined with the word *research*. Using these combinations of search terms to select citations from the three databases resulted in the identification of over 12,000 citations.

The third delimiter of the study was the type of publication. The electronic databases include various types of written material such as articles published in refereed journals, non-refereed journals, and magazines. They also include papers presented at conferences as well as some public agency reports. The researchers limited the selection of articles to those published in refereed journals. Citations from refereed journals were used because such articles cite other works and, further, have been peer reviewed. Peer review is a measure of manuscript quality that is frequently used in academia. To separate the citations for refereed publications from the other types of references, the investigators relied on four reference books: *International Periodicals Directory*, section titled "refereed serials" (Ulrich, 1993), *Directory of Publishing Opportunities in Education* (Cabell, 1992), *Directory of Publishing Opportunities in Business and Economics* (Cabell, 1990), and *Directory of Publishing Opportunities for Management and Marketing* (Cabell, 1994). For purposes of this study, citations from journals not identified in one of these references as refereed were eliminated from consideration.

The fourth delimiter of the study was the year of publication. Only articles published during the fifteen-year period from 1980 through 1994 were included in the study.

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The fifth delimiter of the study was the HRD definition used to screen the citation abstracts. While the definitions identified earlier in this paper contribute to understanding the field, they vary in focus, purpose, and outcomes. Further, none operationalized the concept of HRD at a level appropriate for this citation analysis. For example, each would be a poor filter for determining whether research on team behavior conducted with graduate students in a university classroom should be included in the study. Therefore, for this study, HRD was defined as

> the study and practice of human interactions in organizations including interactions with processes, tools, systems, other humans or even the self. Human resource development encompasses knowledge, skill, and value bases. The goal of HRD is to understand the interactions, processes, and systems and to ultimately support and improve individual, process, and organizational learning and performance.

Operationally, this definition bounds HRD in the following ways: (a) its focus is on understanding, unleashing, or facilitating the use of human expertise within organizations, (b) it occurs within one or more business, industry, military, or public-sector organizations, but does not include educational institutions, (c) it focuses on individuals who are already connected with an organization, (d) it focuses on adults and their learning and work, (e) it is limited to the preparation of HRD professionals and characteristics of interactions, systems, processes, programs, instruments, and their components or results. Using this definition of HRD, the research on team leader behavior would not be included in this study because it did not meet the criteria of focusing on individuals who are already in the organization.

Assumptions. The study's first assumption, which is inherent in using citation analysis, is that the formal properties of a discipline's literature provide evidence of the structural features of the discipline itself. The study's second assumption is that the refereed articles included in the study are, on the whole, more useful for defining the unique area of HRD research than either non-refereed articles, *works* not included in the database, or *works* not selected for the study. A third assumption of this study is that the journals that published the greatest number of articles related to HRD research are core to the field.

Limitations of the Study. A challenge in conducting this type of study was to set the appropriate boundaries such that only core HRD research citations were identified and that all them were included. Each delimiter served as a limitation for this study. For example, selecting different key words or using a different definition could have produced a different set of citations and abstracts for review and, ultimately, could have resulted in the selection of a different list of core journals. By using multiple search terms which included various components of HRD (i.e, *management development* and *career development*) rather than simply *human resource development* the investigators hoped to identify a broader selection of citations. However, it is highly unlikely that *all* HRD research citations were identified.

Several other problems are inherent in this type of research. Each database has its own format for storing and presenting citations. This can lead to difficulty in comparing citations appearing in more than one electronic database. Changes in a database's format over time can affect the selection process. Although most articles from a publication are cited and abstracted, the electronic databases are not comprehensive; that means some articles from some publications may not be included. Also, there may be errors in citations themselves (White, 1985). Abstracts are written by a variety of people. Some are prepared by editors or by professional abstractors and thus represent the abstractor's interpretation of the article. Others are written by the author of the article and supposedly represent the author's intention. Editing abstracts for length or style can also affect their content and how they are interpreted. Further, database citations and abstracts do not use consistent abbreviations, terminology, or formats. Abbreviations for journal names often varied among the databases and sometimes varied within a single database and required frequent interpretation by the investigators. Therefore, in this study, as in other types of research the biases and characteristics of the investigators serve as limitations. Krummel (1988) noted that such research reflects the compilers' insights and aspirations, and their conceptions of what scholarship is needed at that time.

Results of the Study

The study resulted in identifying 258 journals that published 1,290 refereed HRD research-related articles from 1980 through 1994. Table 1 lists the journals that published at least 15 of these articles and shows the number of HRD research-related articles published by each journal in the last five years and in the last 15 years. Comparing the last two columns of the table shows that the ranking of journals based on the number of HRD research-related articles has changed over time. Also, during the last five years, two journals that have been in existence for less than 15 years, *Human Resource Development Quarterly* and *Performance Improvement Quarterly* have emerged as the top and the third ranked leaders respectively based on the number of published HRD research-related articles. Personnel Management was ranked as second for this time period.

A synthesis of citations also showed refereed HRD research-related articles from 1980-1994 across journals (See Table 2). The results highlight that while many journals publish HRD-related research, fewer core journals exist.

Table 1. Journals That Published 15 or More HRD Research Articles from 1980-1994

Journal	*Number of HRD Research-Related Articles Published from 1990-1994*	*Number of HRD Research-Related Articles Published 1980-1994*
Human Resource Development Quarterly	23	23
Public Personnel Management	15	45
Performance Improvement Quarterly	14	16
Journal of Organizational Behavior	12	12
Personnel Psychology	12	74
Journal of Applied Psychology	10	15
Journal of Management	10	31
Management Education and Development	10	19
Public Administration Quarterly	10	16
Academy of Management Journal	9	44
Management Decision	9	19
European Journal of Operational Research	8	24
Organization Development Journal	8	22
Human Relations	7	38
Academy of Management Review	6	54
R and D Management	5	19
Group and Organization Studies	3	43
Journal of Applied Behavioral Science	2	24

Table 2. Number of Refereed HRD Research Articles from 1980-1994 Across Journals

Number of Articles Published	*Number of Journals*
at least 15 articles	18
between 10 and 14 articles	10
between 5 and 9 articles	40
between 2 and 4 articles	81
one article	109

Summary

This study provided a snapshot of HRD *work* and resulted in a list of core refereed journals that publish HRD research-related articles. The results have implications for HRD researchers who seek journals for their work and for HRD practitioners who want to efficiently access research-related work.

The study also has implications for further research. This study is a small step in developing a distinct body of knowledge for HRD. Additional steps could include (a) examining the boundaries of the field, (b) categorizing periodicals, and (c) synthesizing HRD research.

This study provides a concrete example that other scholars can use to discuss the boundaries of HRD and to reach consensus on the delimiters. For example, if an expected journal was not included in Table 1 or if an unexpected journal was listed, then the study's delimiters should be examined.

This study also provides a basis for categorizing periodicals. Bradford's Law of Scattering focuses on the extent to which articles on a given subject appear in periodicals devoted to other subjects. According to White (1985), Bradford concluded that in a given subject area, periodicals can be categorized in three separate groups: those producing more than four references a year, those producing between two and four references a year, and those producing one or fewer references a year. The journals identified in this study could be categorized in this way by combining the beginning publication dates for journals and the number of articles published per year.

The articles identified in this study document *HRD work* from a variety of perspectives including psychology, management, education, communication, human relations, operations, and public administration. Each perspective adds unique outlooks, jargon, and models. Synthesizing these perspectives into a body of HRD knowledge can contribute greatly to HRD practice and research.

Because HRD is an interdisciplinary field representing different perspectives, discussion among HRD scholars is critical to taking the next steps in developing the body of HRD knowledge. The steps are challenging especially because they require reflection on basic assumptions—however, as Watkins and Willis (1991) pointed out, the time for such effort seems right.

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HRD Research and Trade Union Cooperation

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The typical cooperative, Scandinavian setting of the workplace, puts HRD research in a specific context. This paper discusses how research-based cooperation with trade unions can be a productive development within the HRD-research.

This paper will try to contribute to the discussion of research politics in the area of HRD research by presenting some Danish examples where trade unions cooperate with research centres. It will primarily build on the experiences from the Adult Education Research Group at the University of Roskilde. The paper will also give a brief introduction to the general situation of HRD and trade unionism in the Danish context.

Trade Union Politics and HRD

There is a well-known and long lasting history of cooperation on the Danish labour market between employers and trade-unions. It s main focus and central aspect have been and is still the collective bargaining about wages and working conditions. Based on this central task there has also been a long tradition of cooperation in other workplace/workforce-oriented questions. There was for instance a general development of productivity developing wage-arrangements in the sixties and in the eighties there has been cooperation in the process of implementing new technologies. This was based in formal agreements on a national basis as well as formal arrangement on company level. This kind of cooperation between the partners on the labour market was supported by the state. In the area of work-related education - vocational training, postgraduate courses, etc. - there has been a tree-part system, where the education is public founded and regulated by the state, but based in a large system of advisory boards with equal representation of employers and employees.

During the last 10 years this kind of cooperation has been challenged by a number of changes in the workplaces:

- There has been a growing need for individual agreements at local, company level. Both within traditional bargaining questions - wages, working hours, etc. - but also for development of local plans for the education and ... of the workforce. And these plans will not always be developed along the lines at the national union/employer agreements.
- This has to du with the general development in industry - with still more emphasis on innovation, flexibility, etc. , it becomes still more difficult to for instance make plans at national level for the training programs in specific sectors. Both the individual industries as well as the individual employee has raised the demand for specific solutions.
- Trade Unions in Denmark has a long tradition for "handling individualities" in terms of for instance having agreements with wages based both on a collective part and an individual part, negotiated at the local level - both now the members are met with new perspectives in there working life: they have to continuously develop their skills and knowledge, and that is much more vital also in an economic sense than just the bargaining process in the Union. And sometimes it seems like the company (and management) is better to understand and handle this than the Union.

These challenges have been meet by new strategies from the trade union movement. During the last part of the eighties the Scandinavian labour movement developed the strategy for "The developing work" ("Det udviklende arbejde") - claiming that new production system, information technology, etc. have created new possibilities for both companies and employees - that it would be in the interest of both the

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company/management and the employees to make work more challenging, more competent and make the developing of skills and knowledge be a part of the work. This union-based strategy could be seen very much as complimentary to management concepts like "the learning Organisation".

This strategical development within the unions has of course also changed (to some degree) the daily work of the union and the shop stewards. The traditional bargaining and legal questions are still a large part of union work - but the development of support for career planning, educational planning, technology problems, at the members individual workplace has increased the last 10 years. And this has of cause as one of its implications meant a growing interest in HRD and in HRD research.

Trade Unions Interest In Hrd Research

During this development there has been a growing interest from trade union in specific areas of HRD research:

The most outspoken interest has been in the area of linking training and education to the workplace - especially in developing tools for planning of education within industry. Trade Unions very often plays a very active roll in this matter in the companies, and has felt the need for evaluation of the existing procedures when training and educations are discussed in the workplace as well as development of new tools

Another kind of research request is within curriculum development in work related training and education. This is very often formulated by the advisory bodies together with employers and the state - but both within general qualifications as well in different trades and professional fields there have been a number of projects dealing with curriculum development - and the trade unions play an active part in formulating this projects

This curriculum oriented research is also connected to a broader interest in analyses of the changes in demands for qualifications - now and in the future. A number of trade unions have been involved in qualifications analyses.

This has been the picture the last ten to fifteen years - and it is still the most common kind of project. But there is an ongoing shift towards a broader work with other HRD tools than training and education. In the last couple of years there has been an increasing interest for career planning, personal development, and that kind of "soft" and individually oriented tools. As an example of this it's worth noticing that the trade union council of Denmark over the last two years have made three new sets of materials for shop stewards and workplace trade union work - within "employee politics", "personal development" and latest "management".

HRD Research And Trade Union Involvement

This interest from Unions in HRD is also reflected in some of the work done by the Adult Education Research Group at Roskilde University. The Group has approx. 20 members of the academic staff and conducts research and education within adult education, evaluation, HRD, etc. The Group is also responsible for educational programs in the normal University structure - especially the graduate course on adult education.

In research the group has been involved in a number of projects with trade union involvement. This projects are formulated along the interest mentioned above. The largest project has been founded by the Ministry of Labour but with very much interest from Trade Unions. It was a project about General Qualifications especially in relation to short term courses related to the labour market (Andersen et. al. 1994).

Besides this the Group has been involved in the evaluation and development of the internal educations within the trade unions. Due to the great number of tasks within the trade unions and their involvement in a number of areas in society and industry there is an extensive education within the trade unions - with own schools for adults etc.

And finally there have been a number of projects dealing with the integration of HRD tools - especially planning and utilisation of the extensive public training system for workers. Companies can send

employees to courses (one - two weeks) - free and with compensation for a great part of the salary payed to the worker.

The basic scientific problem in this kind of projects has been similar to other research "on demand". There is a pressure on getting to practical, "implement-ready" and useful results - and less emphasises on the scientific aspect of the research. That is a struggle that is also a part of this kind of projects.

An often asked question is off cause whether this becomes political work with predetermined results. Again, the problem is more generally related to the setup of research on request/from external customers. It can be politically difficult because in this case the Unions have opinions they don't like being questioned - but in the matters we discuss here there are not that many assumptions in advance and generally the unions are open-minded in this area. But there are some good discussions going on - but none of them has lead to restrictions on the scientific side.

So there are no - or very small - disadvantages in this kind of cooperation, and there are several advantages: First of all does this kind of cooperation in a Danish context foster a very good relation with the employees and the ability to get into the workplace. It very often means that there is basic trust between researcher and "the people on the floor". Secondly it brings the real world - as it s developing out there - into research. And the political discussion, the general concept of cooperation among all partners on the labour market is part of reality out there - and also for HRD in the companies. Therefor it has to be part of HRD research as well.

Conclusions

The examples given here have been very closely linked to the Danish situation. But what can be a general point is, that a very explicit research based on the Human side of HRD, the actual individual - not just an abstract "employee" or "member of the workforce" - can be of interest, and can be productive. The field of HRD deals with social techniques and they are not by nature neutral. We are all part of the process of modernisation and especially in these years there is an enormous interest in thehuman factor.

But if we don't constantly question and discuss the actual lines of development then we neglect our responsibilities as professionals in HRD. We have to discuss what the implications and the result of the techniques that we are part of will lead to. Is this for all human beings a happy development - is this processes that will give us a more democratic society? Questions that don't have easy answers - and by my opinion not even traditional political answers - but which has to be discussed. Discussed within our professional groupings and with the people we do research on.

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Theoretical, Conceptual, and Methodological Issues Surrounding a Large Scale Change Effort: The Ford Motor Company/University of Georgia Manager as Instructor Research Project

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This paper traces the evolving role of managers as educational leaders for the learning organization. The manager as instructor approach implemented at Ford is described. Organizational change researchers face a number of design issues in measuring large scale change projects such as this across many different hierarchical levels and settings. This research project utilized a two level survey design, qualitative interviews, and a developmental change model.

The Ford Design Institute's mission at Ford Motor Company is to change the fundamental way in which vehicles are designed and manufactured within Ford. Education and training is being used as the pivotal process to bring about this change. One key element of this educational process is using technical managers as instructors in a top-down cascading training environment. Since this type of training delivery is a relatively new process within Ford, it was critical that it's effectiveness relative to promoting organizational change be documented.

The purpose of this research was to empirically document the effectiveness of this process as a change strategy and to delimit the boundaries of the approach. Watkins and Bellinger (1996) details the research partnership. This paper describes the theoretical framework undergirding the research, the research methodology, and preliminary findings. The theoretical framework incorporates the Concerns-Based Adoption Model (Hall & Hord, 1984) which suggests that there are predictable stages of concern and levels of use associated with the implementation of new innovations and that innovations are adapted by users into multiple configurations, some of which may be ineffective in producing the desired behavior change.

Theoretical Framework

In this study, we drew on the work of Hall and Hord (1984) whose Concerns-Based Adoption Model empirically guides the innovation definition and implementation process and on the transfer of training research (Baldwin and Ford, 1988). The Concerns-Based Adoption Model is a conceptual framework and an approach to measuring and documenting the progress of innovation adoption and implementation. In the Ford project, the innovation of concern was the use of managers as instructors. From the perspective of participants, the new approach to engineering being taught by managers in the Robustness Imperative course was also an innovation.

The Innovation Configuration. Innovations are almost always adapted by implementers to fit the organization's circumstances--what has already been done, what is possible given organizational history, resources, and motivation, and what best addresses organizational concerns (Berman and McLaughlin, 1974). Researchers Hall and colleagues determined that, because of this typical approach to change, it would be important to determine what exactly is implemented. Therefore, we could also determine whether some configurations are more effective than others. An innovation configuration is a list of essential components of an innovation along with

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acceptable and unacceptable variations (Hall and Loucks, 1978). Configurations are determined through a process of asking innovation developers and facilitators a series of questions:

--What would you observe when the innovation is operational? What would be different when the organization is using the innovation?

--What are individuals in the organization doing?

--What are the critical components of the innovation?

Following these interviews, the configuration is further defined by interviewing and observing users of the innovation to identify additional components and to get feedback on acceptable and unacceptable variations. In this study, the innovation was the manager as instructor approach. We examined Ford documents describing the intended implementation process and then developed an innovation configuration checklist as part of the survey of participants in the training program.

Stages of Concern. A second dimension of the Concerns-Based Adoption Model used in this project was the stages of concern. Stages of concern are predictable, developmentally evolving feelings and concerns about use of an innovation which can be used to identify the stage of the change process. Prior to adoption of an innovation, individuals report concerns about themselves--whether or not there is a fit between their interests, skills and role with the innovation, whether or not using the innovation might make them lose face, etc. Once they have begun to use the innovation, they are more likely to report task concerns such as concerns about the amount of time the change is taking away from other responsibilities or about the awkwardness of doing something new. Only well-established innovations reach the third stage of impact concerns. In this stage, individuals are concerned about measuring the impact of their activities to determine whether or not the new approach is more effective. From our conversations with the innovation designers and with instructors, it was clear that this was a significant area to explore. Stage of concern theory suggests that innovations fail if self and task concerns are not addressed in the early stages of implementation.

Transfer of Training--Extent of Use. A major criticism within the training literature is that organizations' investments in training and development are often not fulfilled because transfer of training is not maximized (Baldwin and Ford, 1988; Analoui, 1993). While research initiatives have examined the constructs associated with transfer, for example, supervisor supportiveness of training, a supportive organizational culture, most research focuses on improvements in the training experience -- not necessarily on how training is actually conducted, or alternative approaches. The workplace needs to be recognized as a place where people can and do learn (Billett, 1992). Often the training environments in which people 'learn' are quite different from the physical and social environments in which the learning is applied. Within the workplace, for example, its would be expected that employees would have access to peer experts as well as to feedback from peers and managers. The quality of relationships of peers and managers, teachers and students, experts and novices, and supervisor and subordinates will depend upon the nature of the setting and the quality of the culture (Billett, 1992). While relationships and culture are moderating variables within organizations, managers assuming expanded roles as trainers, instructors and educators may impact organizational learning and transfer.

Today, it is estimated that employers invest $210 billion in workplace training (Carnevale, 1990). Despite the investments in training, "not more than 10% of these expenditures actually result in transfer to the job" (Georgenson, 1982, Baldwin and Ford, 1988). The manager as trainer, instructor and educator approach is a promising training intervention to increase transfer of training, as well as to facilitate learning at multiple levels within organizations. Research on transfer and the impact of training has found that individuals are less likely to use the skills learned in training if these skills are not reinforced and supported back at work. Huczynski and Lewis (1980) found that transfer was enhanced when learners had pre and post training support from their bosses and when bosses sponsored the educational intervention. Most transfer studies test learning and retention of knowledge and skills . Baldwin and Ford (1988) identified seven studies which looked at the work environment and transfer. In these, measures of generalization and maintenance of the change included attempts to transfer knowledge to work practices and measures of perceived on the job changes. Similarly, innovation researchers identify levels of use of an innovation from learning more about it or preparation for use, to early skill practice, to more refined use (Hall and Hord, 1984). This study hypothesized that individuals would not yet be likely to actually use the new robustness design principles, but early stage use, particularly reading more about the practice or talking to others about its significance to their current design approach, might be more evident

among those who experienced the innovation as intended. Therefore, we operationalized transfer as the extent of early use behavior among participants of the principles taught in the first course as part of the implementation of the manager as instructor approach.

Managers as Instructors and Role Fit. Initially, the Ford Design Institute was introduced to a process called LUTI that was implemented at Xerox. This approach called for managers to serve as instructors following a sequence in which they would Learn the subject themselves, Use the skills in their work, Teach it to others, and Inspect others' use of the new skills. Grounded in solid learning theory, the approach was accepted at Ford. It was also adapted. Managers did not Use the innovation before teaching it nor were they expected to Inspect the use of the skills once they had taught them. This study could not explore the possible comparative effectiveness of the original model vs the FDI approach, but it is likely that the elimination of these two steps influenced the results. Research on using managers as instructors is limited and largely descriptive (Ellinger and Watkins, 1996). This study focused on managers' concerns about the innovation and their belief that serving as an instructor did or did not fit among their roles and responsibilities.

Conceptual Framework for this Study

Figures 1 and 2 below depict the conceptual framework undergirding this study. Implementation researchers Goodman and Steckler (1989) note that trial use is the product of a series of critical factors, particularly a decision about whether or not the costs of using the innovation are offset by its benefits. Our framework suggests that a critical component of that cost-benefit analysis is the extent to which the change is congruent with user's beliefs about what should occur.

Figure 1. Organizational Impacts Of Using Managers As Instructors--Participants' Perceptions

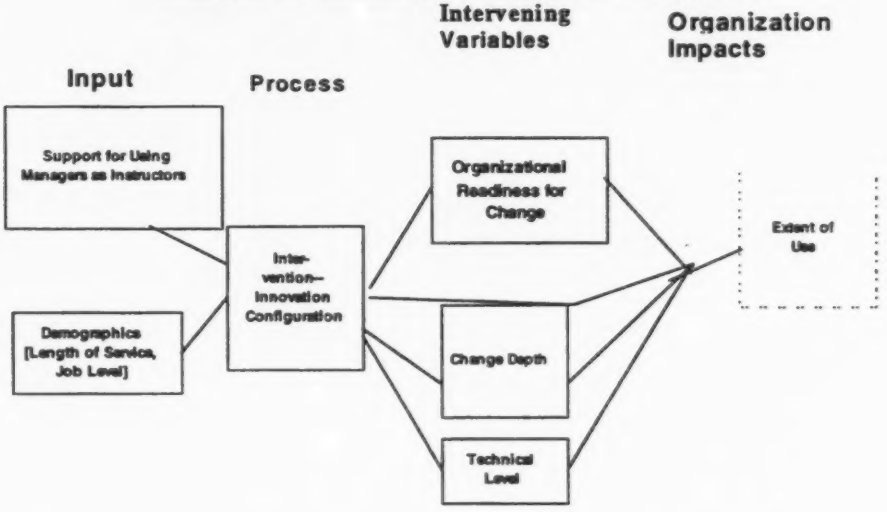

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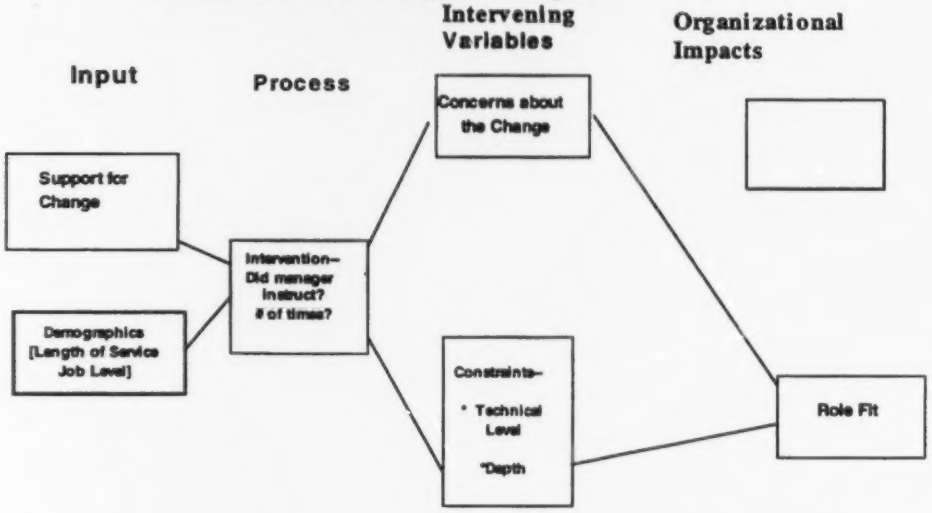
Figure 2. Organizational Impacts of Using Managers as Instructors--The Managers' Perceptions



Research Objectives

- To identify some of the ways the manager as instructor approach is and is not perceived as effective as a component of FDI's overall organizational change effort
- To identify ways of strengthening the manager as instructor process

Limitations of the Study

1. This study did not measure the manager as instructor approach against other educational or training delivery methods. Although such a comparison would be useful to help argue for or against this approach, human and organizational processes are so infinitely variable that there was little likelihood that a fair or comparable comparison could be made. This study enabled us to learn more about the conditions under which the manager as instructor approach is likely to deliver greater impact.

2. This study emphasized the FDI manager as instructor approach as an educational innovation and therefore did not measure knowledge gained through the approach. Since FDI had already conducted such a study and found the results more than satisfactory, this study was limited to determining the extent to which participants reported early use of the innovation. Based in the literature of organizational change, the results of this study speak more to the use of the manager as instructor approach as an educational innovation. The extent of use measure is a transfer of training measure which may be used to document transfer over time.

3. This study did not document the long term benefits of using the manager as instructor approach. This study is a slice in the long term evolution of an innovation. As such, it took a pulse and established a benchmark against which FDI can later test to determine whether or not changes have continued to occur. Because innovations such as the use of managers as instructors or the use of robustness in engineering practices are skills which evolve with use, it was anticipated that individuals would respond differently to these questions over time. Therefore, we scaled key constructs developmentally to depict where the organization is at this time in the life of the implementation of the FDI manager as instructor approach. The extent

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of use scale moves from thinking about doing, reading or gathering information to inform use, to using the concepts of robustness. Similarly, managers' concerns about serving as instructors range from early use concerns [personal concerns about role fit, lack of information, or concerns about having the time to implement the change] to concerns about their impact as instructors on their employees.

Assumptions of the Study

1. Change is a process, not an event (Hall and Hord, 1984).
2. Change involves predictable, measurable, developmental changes in concerns and ability.
3. Individuals' perceptions are one measure of the outcomes of this change.
4. More than one configuration of the innovation can lead to effective outcomes.
5. When the long term objective is a change of the paradigm underlying engineering and manufacturing practices, managers need to be extensively involved in learning, teaching, and inspecting the implementation of this change.

Methodology

Quantitative and qualitative methodologies were employed to study this change process. Qualitative research activities included semi-structured interviewing with a random sample of managers and participants (Ellinger and Watkins, 1996). The findings from this research effort were incorporated into the survey design. Collaborative survey development was undertaken to create two different survey instruments for distribution to the population of managers serving in instructional capacities and the population of participants exposed to this cascaded change process. The survey design differentiated between users of the innovation and those affected by it. The two surveys enabled researchers to explore different dimensions of the innovation. From both groups, we determined under what conditions each group supported use of the managers as instructor approach. From participants, we determined the configuration of the innovation that had actually been implemented, and the extent to which they were already using the change which had been presented by their managers through this approach. From managers, we determined their stage of concern about serving as instructors and the extent to which they felt that this role was consistent with their sense of their emerging roles and responsibilities.

Manager surveys were distributed to a random sample of 351 managers and participant surveys were mailed to 1249 participants. Actual response rates were 233 managers [66.4%] with 205 usable surveys, and 715 participants [57.2%] with 665 usable surveys. Mean years at Ford among managers was 24.3 years, among participants 13.6 years. Instructors had taught an average of 2 courses using this method and participants had attended a mean of 1.5 courses taught by their managers. Eighty-five per cent of managers were at job levels 3 and 4 and 93.7% of participants were at job levels 1 and 2. For most computations, the sample was treated in the aggregate of all manager/instructors or all participants. Samples were further subdivided by innovation configuration and stages of concern for correlational analyses. Scales were tested for reliability. Reliability scores for each of the scales were strong, ranging from .94 to .65.

The design which emerged from this collaborative research project blends organizational change measures and program outcome measures. Through correlational analysis, frequency distributions, and t-tests; patterns of response were detected.

Results

Table 1 below depicts the conceptual dimensions measured in this study including scale reliability information and scale means.

Table 1. Conceptual Dimensions Measured

Dimensions	Scale Alphas	Managers	Participants
Perception of Role Fit	.87	*4.3*	
Support for Change	.94	*4.13*	*3.91*
Stages of Concern	.79 .75	*task 3.7* *self 3.9*	
Extent of Use	.90		*2.59*
Innovation Configuration			*[see table below]*
Conditions Affecting Use	3 technical levels, 3 degrees of change	*4.6,4.1,2.5* *3.5,4.5,4.7*	*4.2,3.8,3.0* *3.8,4.3,4.4*
Organizational Change Climate	.65		*4.03*

Hypothesized relationships among variables were that managers who believed that serving as an instructor was an appropriate role were more likely to support the rationale behind the change [supported with a correlation of .84, significant at the .0001 level]. Participants who experienced an ideal or acceptable configuration of the innovation were more likely to support the rationale for the change and to report higher levels of use of the concepts and principles of robustness.

Results from the innovation configuration portion of the data analysis indicate that, as is often the case, the innovation was frequently adapted to suit local circumstances. Respondents indicated that only 48.7% of our sample experienced the innovation in its ideal configuration. Another 17.9% experienced an acceptable variation. An astonishing 45.1% experienced an unacceptable configuration. For example, 7.8% stated that their manager did not attend at all. It became clear that one of our most important variables had been to determine what after all had been implemented so that we could be sure that we were measuring the same phenomena and also that we were giving a fair test of the intended innovation. We wondered whether or not the manner of implementation affected individuals' support for the innovation and/or their use of it. Table 2 compares participants' description of the innovation configuration implemented relative to their support for the innovation and use of the intended change.

Table 2. Effect of the Innovation Configuration on Support for the Innovation and the Extent of Use

Innovation Configuration [IC]	% of each [IC]	Support for Change [CS mean]	Receptivity to Organizational Change	Extent of Use [EU mean]
Ideal	48.7	3.96	4.09	2.61
Acceptable	17.9	3.95	3.93	2.71
Unacceptable	33.3	3.83	3.99	2.54

Clearly, use was impacted by what was done. Equally interesting is that participants who did not receive the correct version of the innovation were less supportive of the concept--in this case in the abstract. Important for FDI's purposes, all respondents were supportive of the change. All means were in the direction of agreement with the innovation. Manager/Instructors were significantly more in favor of this innovation, though both groups supported it [Means of 4.03 for manager/instructors and 3.82 for participants; this difference is significant at the .04 level]. Managers and instructors also agreed that the more technical the level of the content, the less appropriate this approach. Also, they agreed that the broader in scope the change effort, the more appropriate this approach.

Extent of use of the change, the outcome variable in this study, was particularly interesting. We predicted that responses would be quite low since participants had only been

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introduced to the concepts and principles of robustness and had not had more advanced courses describing how to use the concepts or technical application. Not surprisingly, the overall scale mean was 2.59 on a 6 point scale. What is surprising is that the two highest means referred to self-directed behaviors [planning on my own about how to use the concepts, mean of 3.36; and using the concepts in my engineering and manufacturing practices, mean of 3.16]! When we developed the extent of use measure, we scaled the items toward preparing for use through to actual use to account for this early stage of the change process. Yet, one of the highest means was the one we thought would be lowest [actual use].

Implications for Human Resource Development

Program innovation is often risky business. Those in favor of the new ideas are often vague in their understanding of all that is entailed and those opposed are fiercely articulate about how the new approach encroaches on sacred turf. Innovations in human systems are even more problematic. People are often unpredictable, complex, and highly differentiated in their responses to new approaches. It is reasonable then to assume that an organizational innovation will engender strong responses; that these responses will be divergent; and that these differences will be important. For example, do people embrace the manager-as-instructor approach in this instance because it fits their sense of their emerging role at Ford or because they like to teach? Do they disagree with the approach because they think that this is not an appropriate use of a manager's time or because they are already overwhelmed by their responsibilities and this is an add-on? So, it is important to ask under what conditions managers' favor the innovation. Finally, change is an evolutionary, developmental experience. Responses are often more negative during the early phases of implementation because the change breaks routines and familiar ways of working. Measures which enable researchers and program designers to differentiate between typical early innovation responses and more deep-rooted concerns such as those used in this study are needed.

Watkins (1989) has defined human resource development as "the field of study and practice responsible for fostering a long term, work-related learning capacity at the individual, group and organizational levels. As such, it includes, but is not limited to training, career development, and organizational development" (p. 427). This definition, which reflects the vision of the learning organization, seeks to open the traditional paradigm of practice of the field of HRD beyond the traditional behavioristic view of practice to incorporate organizational learning. Watkins and Marsick (1992, and Marsick and Watkins 1994) assert that their vision of the field will expand HRD's role from changing the threshold of skills in the organization to becoming partners in the transformation of the organization. Human resource developers will not abandon their roles as trainers in ensuring that the workforce has the requisite work skills; they will however, "extend their impact in almost exponential fashion by working with all employees to make self-managed learning more effective and by creating ways for people to share what they learn" (Watkins and Marsick, 1993, p. 21). Additionally, they can also work closely with managers to build a culture which supports learning within the organization. In turn, managers will be challenged to assume new roles such as trainers, coaches and mentors. This research demonstrates that the road will not be easy.

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Partnering for Research: The Ford Design Institute/UGA Research Project

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This paper describes the Ford Design Institute's Manager as Instructor project and the joint research project conducted with UGA to assess its effectiveness. Partnering between corporate and university researchers gave greater depth and quality to the research process.

The Ford Design Institute's mission at Ford Motor Company is to change the fundamental way in which vehicles are designed and manufactured within Ford. Education and training is being used as the pivotal process to bring about this change. One key element of this educational process is using technical managers as instructors in a top-down cascading training environment. Since this type of training delivery is a relatively new process within Ford, it was critical that it's effectiveness be documented. The purpose of this collaborative research was to empirically document the effectiveness of this process as a change strategy and to delimit the boundaries of the approach.

Collaboration between business and universities is hardly new, yet there is an increasing need for research which responds to significant business' educational needs. This research sought to help FMC make sound decisions about its future use of the manager as instructor approach.

The Manager as Instructor Project

The Ford Design Institute was created in January of 1992. Senior management took control of technical training because they believed that technical information and skills were not moving out into the engineering community fast enough. Moreover, the type of skill needed was not an incremental improvement but a significant transformation in how automobiles are engineered at Ford. The new process was to be taught to the approximately 19,000 engineers. It was estimated that this would take about 50-100 hours per engineer or roughly 1.9 million hours of training! FDI was faced with an enormous challenge. The FDI board consisted of high level individuals from TI, Xerox, Hewlett Packard, etc. and Xerox had used a process called LUTI [Learn, Use, Teach, Inspect] to teach large numbers of individuals in a compressed time period.

LUTI. This approach called for managers to serve as instructors following a sequence in which they would Learn the subject themselves, Use the skills in their work, Teach it to others, and Inspect others' use of the new skills. Grounded in solid learning theory, the approach was accepted at Ford. It was also adapted. Managers did not Use the innovation before teaching it nor were they expected to Inspect the use of the skills once they had taught them. Since March of 1993 when the first course was taught in this manner, over 11,000 engineers have taken the course. Evaluations of the course were very positive. On an early FDI survey of 1,467 participants, 83% of participants gave an overall satisfaction rating of 4 or 5 on a 5 point scale. When asked whether the manager as instructor concept supports the learning experience, 83% of respondents gave a rating of 4 or 5.

Yet, some managers questioned whether the time invested was worth the outcome. A second study by FDI assessed learning by participants. Results of this study were also positive. Nevertheless, human resources challenged the approach and some managers continued to wonder whether or not serving as an instructor was the best use of their time and whether participants were learning. FDI concluded that the issues were more complex. How many managers objected to the

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approach? Were they objecting due to pedagogical reasons, personal concerns about their abilities and role demands, or a belief that this was not the best way to introduce this change? Was there some way to definitively prove that this approach was as effective or better at introducing organizational change? In order to answer these and other questions, two surveys were designed and conducted in partnership with UGA.

The Joint Research Project

Elsewhere, we describe the research project in detail (Watkins, Valentine, Ellinger, Cseh, Bellinger, Barnas, Blum, 1996; Ellinger and Watkins, 1996). Here we note points of collaboration and the impact on the research. This project was initiated when Dr. Lewis Bellinger phoned Dr. Karen Watkins Fall, 1994 to solicit a proposal for research. Subsequent to the initial phone call, Dr. Bellinger flew to Georgia and met with the research team of two faculty members and two graduate assistants that Dr. Watkins had assembled to address this issue. During the meeting, Dr. Bellinger outlined the situation described above and listed the outcomes he expected on a flip chart. Through discussion and elaboration, the UGA research team clarified these expectations and later developed a proposal for funding. This was negotiated with FMC and UGA was awarded the grant several months later. Unfortunately, the negotiation process persisted longer than anticipated, eliminating part of the window of time available at UGA to develop the surveys. Nevertheless, the UGA research team developed an initial draft of a conceptual framework for the study, research objectives, data analysis and sampling procedures, and shared these with FMC staff.

Meanwhile, at FMC, the preferred projected time window for conducting the surveys slipped by. It was hoped that the survey could be developed and conducted before the introduction of Ford 2000. Nevertheless, Ford 2000 was launched in January 1995 and the organization was involved in a top to bottom reorganization of functions. The Manager as instructor project was a small change compared to the size and scope of the new globalization effort. Also, with the reorganization, many of the participants in this project were relocated which made it more difficult to secure a sample. The human resources department also entered the picture as this point. As FDI project members reviewed the initial surveys, they began to see the need for wider support for the research. They took the grant proposal and subsequent documents to an enlarged committee for their input. This process took several months and the research project was delayed. A contract extension was granted to enable project completion. In effect, like the managers who had complained that serving as an instructor was more task on top of an already crowded schedule, the research teams had to conduct this project in addition to myriad other changing responsibilities. The net result of this was that team members e-mailed, faxed and talked by phone episodically until they had reached clarity on the research objectives. UGA revised the participant questionnaire based on the new research objectives and subsequent conversations with FDI.

A significant turning point in the project was the opportunity for two face to face meetings. In May, two of the FDI team met with Dr. Watkins at the American Society for Training and Development annual conference in Dallas and clarified their joint perceptions of what was needed in the surveys and what was not present in the initial versions. Revisions were made and sent to FDI for a retreat held in June at a local bed and breakfast inn in Athens, GA. At the retreat, all seven project members met for the first time in the same place and went over the research objectives, limitations of the research, and did an item by item analysis of the participant survey. The design specifications for the manager survey were identified and agreed upon--what it must assess vs the participant survey. The details of survey administration and sampling were worked out and a communication process established between UGA researchers and FDI staff distributing the survey. The decision was made to code the surveys to pave the way for possible follow-up surveys.

From the standpoint of collaborative research projects, this meeting was crucial. While it was intensely focused on the details of the research project, it also permitted the team to both reach consensus and to explore the constraints faced by both teams. One of the more significant constraints was the desire of FDI for the equivalent of E=MC 2d. How could they convince an engineering audience of the "truth" of our findings if they could not obtain proof with mathematical precision? From the UGA standpoint, how could we assess the comparative effectiveness of the approach when we could not compare it to other approaches either within Ford or outside of it? On the other hand, UGA was convinced that human perception and correlations

significant to the .05 level were valid measures of the effectiveness of the approach--a social science kind of truth. This issue was an important conversation both about the nature of this type of perceptual survey research and its limitations, but also about the importance to the corporation of compelling results. To influence opinions which had already begun to galvanize against the innovation would take more than the sum of all perceptions. The team discussed and clarified the limitations of this research through this conversation. While these may seem inherent in survey research of this kind and routine to researchers, the organizational impact was much more significant. As an intervention, the more compelling the data, the more data may drive decisions.

In November, surveys were distributed. Initial responses from participants suggested that a few were distressed at the use of coded response envelopes and went to considerable lengths to remove these identifying codes or to mail the survey in different envelopes. In December, a follow-up mailing was sent by UGA to all non-respondents in the original random sample reassuring non-respondents of both the need for their response and of the confidentiality of their responses. January 15th, the researchers cut off responses. Surveys were entered into the database as they came in. Data analysis was performed to determine mean responses for all items, scale or dimension means, and correlations among variables and across demographic categories.

Partnership Outcomes

As the survey results are disseminated at Ford, the outcomes of this partnership will become more evident. We look at outcomes in terms of products from this research, dissemination plans, organizational uses of these results, and contributions to knowledge.

Products from this research include two surveys which incorporate the following scales: an innovation configuration checklist for the manager as instructor approach, stages of concern of managers about serving as instructors, role fit, support for the innovation, extent of use, receptivity to organizational change, and boundaries of the change. A final report of findings from both quantitative and qualitative measures will be developed. In addition, literature reviews of innovation research, using managers as instructors, and changing roles of managers in learning organizations, were developed. Through this research, a large database of participant information was created with the potential to conduct future comparative research with this same population.

Potential outcomes also include *dissemination* of the research findings in joint articles and presentations. The project will be described at the annual conferences of the International Society for Performance and Instruction conference at Dallas, the Academy of Human Resource Development, and the American Association for Adult and Continuing Education.

More telling will be whether or not this research *influences decisions* at Ford. As Dr. Bellinger has noted, the train is gaining momentum to make a decision about the manager as instructor approach, irrespective of the results of this research. Participants appear to be satisfied with the approach and yet some managers and the training department are not. Even clearly positive research findings may not sway minds that are already made up. Yet, research of this kind is seldom that transparent. More likely, results will be open to multiple interpretations.

Other potential uses of the research in the organization include suggestions for improvement particularly involving managers in the design of future courses and in tailoring how managers will assist in the educational mission of FDI. One critical finding of this research was that only 66.6% of the participants experienced the innovation as it was intended. In fact, only 48.7% experienced it in the ideal configuration, another 17.9% experienced what FDI described as an acceptable variation, and 33.3% experienced what FDI identified as an unacceptable configuration of the innovation. As the organization makes decisions about the future of this approach, a number of implications of this finding should be considered. For example, one might ask from this statistic if FDI had sufficient power to influence use. Should future innovations incorporate more monitoring of implementation and support from top management? Further, was there confusion about what was done on the part of participants, or about what was expected on the part of managers? Since managers who implemented the program in an ideal or acceptable manner also achieved higher levels of use on the part of participants, should the program be continued with tighter monitoring of actual implementation?

Johnson and Tornatzky (1984) surveyed 118 university/industry cooperative research projects supported by the National Science Foundation to determine what project features led to successful technical and organizational outcomes. They found that, while both groups believed

that outcomes were enhanced due to the collaboration, 75% of university researchers and 31% of industry collaborators were completely satisfied with the responsiveness of the project to organizational priorities and interests (p. 12). We wonder to what extent this may be true here as well. The situation at Ford has evolved during the course of this project. Refinements have been made to the course, new courses have been added, and new delivery alternatives are being explored. We are concerned that we may have elegantly answered yesterday's questions while today's questions loom large.

The importance to partnering of goal alignment among all partners was stressed by Poirer, C. and Houser, W. (1993). We have observed the difficulty in attaining this goal without time to develop shared meaning and understanding of our different perspectives on the problems and issues. While it was clear from the beginning that all members of this team were aligned in believing that this approach at least theoretically had high potential for enhancing transfer and the organizational change mission of FDI, the usual gaps between idea and action have impacted both the research and the implementation. Not all managers implemented the process as intended; contact among research teams has been sporadic and episodic, and organizational needs have moved on. While we have a shared goal of conducting surveys to determine the effectiveness of this change, we are not yet clear about how the results can best be used both to make decisions at Ford and to add to knowledge in human resource and organizational development.

Changes in science or *contributions to knowledge* were correlated with higher levels of interaction [and in industry with involvement of more senior management and research and development staff]. In this project, an attempt was made to include senior members of HR to gain their support for the project, yet they had little involvement with the overall project. Without this wider support for the findings of this research, will we be able to influence deeper structures such as how training is designed in the future and how innovations are implemented at FMC? Will FDI incorporate the concept of the innovation configuration as a routine part of their thinking about future innovations? Will UGA researchers be able to develop measures which have the potential to tap the pulse of a moving target while speaking to issues at deep structure levels, below the surface of the presenting problem?

Recognizing that a complex change such as using managers as instructors or the robustness design concept would take years to implement, we described the present outcomes in terms of perceptions about effectiveness against a developmental change framework. Yet, like the instructors who complain that it was perhaps shortsighted to assume that you could learn to teach something by attending a course one time, we are struck by the way in which all of us have not paid sufficient attention to the time it takes for individuals and organizations to move through the learning curve. We have also observed through qualitative data analysis (Ellinger and Watkins, 1996) that, once again, learning will not lead to performance without individuals' internalization of authority to act. Yet, individuals reported greater use of the concepts of robustness as taught by their managers than was predicted by FDI researchers. Is this a function of self-directed learning, their sense that the change was mandated, or something else? We have strong measures of the organizations' use of the innovation of interest, the manager as instructor approach. Given the impact of variations from the ideal on overall outcomes, how might FDI better understand its critics? Are they more likely people who have not experienced the change at all? More interesting is that the organization may already be moving to implement a different approach before this one has matured. How can the organization learn when it is always doing something new? As is so often the case, we are left with more questions revealed by the questions we have already asked.

Looking to the Future

Corporations are becoming one of the largest institutions for education and training. At the rate they are going, they will be competing with higher educational institutions. Even now, many grant degrees. At Ford Motor Company and other knowledge based organizations, the half-life of technical knowledge keeps getting shorter. Meanwhile, time away from work is increasingly precious. FMC is committed to changing through learning to bring engineers' knowledge up to date. Yet, their business is not education. FMC anticipates that they will have to move into more and more partnerships with universities. They have always turned to engineering schools yet corporations now need to develop relationships with Colleges of Education. It is difficult to determine who is out in front since top ranked colleges and schools of education are generally

ranked based on their work with primary and secondary education. How will businesses find the programs which are best able to help corporations design educational interventions which integrate work and learning needs? What can academic HRD programs do to clarify what we do or to change what we do to be more responsive to industry needs? Through partnerships such as this one, we begin the dialogue which allows each of us to better understand long term knowledge demands.

At FMC, the corporation is expected to warranty their products for five years, to design the product robustly. This means to build services into the design of the product such as in no-iron fabric. At the university, we grant a degree and close the university's doors behind the individual. What is our obligation to ensure that the knowledge and skills students acquire during their tenure at the university will endure--at least five years?? What is the academic equivalent of a robust design? Would it be to teach people the skills of self-directed continuous learning, learning how to learn skills? Or would it be to require refresher training periodically to maintain a degree? Similarly, what can we do in a research collaboration such as this one to ensure that the organization is able to continue the research in the future to extend the knowledge, for example, creating measures which can be administered again and again such as the extent of use or stages of concern measures which are designed to evolve over the course of the change project, or templates which can be reconstrued to measure similar phenomena such as the innovation configuration checklist in these surveys? How can we collaboratively determine and address the critical unanswered questions which emerge from the research? What answers can we jointly find for problems of this size?

Through partnership, we learn another's world view. The experience helps us see the multivariate world of two organizations caught up in rapid white water change trying to learn while treading water and shouting across the thundering noise of the rapids. Moving faster and faster, we touch briefly and absorb the lesson, change minutely, and move on.

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The Partnership Journey from Satisfaction to Performance: Human Resource Development Becomes a World-Class Business Partner

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The training department of a large national company is in transition from a traditional support function to becoming a valued performance improvement business process. Key to the transition has been (1) establishment of a business roundtable, (2) the change in the success evaluation from participant satisfaction to measuring contributions to business performance and (3) a business-scholarship partnership.

Traditionally, training and development departments have focused on improving skills, knowledge, and attitudes of individuals. The confirmation of success has primarily been by measuring individuals' satisfaction with training events and, to a lesser extent, the learning that has occurred This has often resulted in training being viewed as an optional and sometimes wasteful activity by their business decision makers. What is required to transform training into an equal, value-added, critical business process within the organization?

This manuscript is about the challenge of leading a training and development effort within a large (25,000+ employees) national company. Senior management recognized that training and development was not accomplishing the objectives required to support the organizations' aggressive growth and change requirements. Yet, they did not understand exactly how they wanted to change or develop the focus. Something new was required.

What is this something new required from the training and development department to assure the success of the organization into the future? What is training and development's role in the transformation process to make the organization's vision real? This is the journey from satisfaction training to performance improvement, from training and development to human resource development (HRD) aimed at improving performance. HRD may be defined as a business process for developing and unleashing human expertise through organization and development to improve performance (based on Swanson, 1995). This has been and is a process of creating a new HRD vision, mission, and structure. It means translating the new vision and mission into actions necessary to transform training and development into an equal business partner, perceived as critical to the achievement of the organization's strategic imperatives.

The journey begins with an assessment using the metaphor of a journey. Where are we now? Where are we going? What are we interested in accomplishing that we have not accomplished before? Next we plan an itinerary: How are we going to make the journey? How much will it cost? What are the sights we will see? In this situation, we have already left on the journey. The questions are being asked as we are traveling. So much for planning. Who is planning this trip anyhow? Who are our travel companions? How do we pay for this journey? Do we spend our own money or do we get our money from someone else? If we embark on this journey, what do our sponsors expect in return? This paper will address some of the issues faced in one organization's attempt to transform itself to meet the requirements of its business environment. Maybe this journey is about coming-of-age, of growing-up, of self-discovery, of HRD becoming an adult partner in the leadership of our organizations.

Where to start?

In this organization, the training efforts had been distributed across a number of different functions and levels. A new team was formed to merge these various training activities under one umbrella: product training with sales training with technical training with operations training efforts. This "new training process" has started the journey to becoming a performance-based HRD effort.

The charter started with a request assuring that every employee receives the training they need to be successful in their position. In the sales organization, the charter is to significantly "touch" every person twice a year in a way that substantially improves their performance as verified by self-report and documented evaluation. This resulted in an overall training and performance consulting vision: we will exceed the expectations of our business partners by providing world-class performance development processes, expertise, and tools driving superior performance. We will achieve this vision by: (1) consulting with our business partners to assess performance gaps, recommend improvement strategies and shepherd on-going performance improvement, (2) designing, developing, and delivering producing HRD/performance improvement interventions for work processes and employees-- new and old, (3) evaluating the impact of HRD/performance improvement interventions focused on the strategic imperatives of achieving customer/provider satisfaction, dominating market share, maximizing profitability, and promoting a culture of winning with highly motivated, well-informed, diverse associates.

Recognizing that this required a shift in internal functioning and a realignment of relationships with customers, training staff met as a team to consider what to rename what had been a training function. Based on the perceptions of a new role in the organization they selected "Training and Performance Consulting." Training provided a connection to the past and a framework for internal customers to engage in the shifts implied by performance consulting. The name illustrated the recognition of the need to redesign HRD efforts around performance improvement from the beginning of every intervention and not to justify programs based on participant satisfaction.

Who are the customers? In the corporation, the primary customers are first and foremost the external customers. Even so, the senior management team is the intermediate and internal customer. They control the budget, set the strategic direction and initiatives, and make the final value judgments of our efforts. The senior vice-president of each functional area has specific development requirements they want fulfilled. In addition, they are the leaders of significant strategic change occurring in the organization. Defining and meeting their present and future requirements is critical to every other aspect of our journey.

How do we enable our clients to take advantage of "Performance Consulting (PC)" capabilities? To some degree, senior managers may be unsure of what to ask for, what behavior to support, how to clearly define what it is they intuitively know they need and want. How do they even evaluate if they have the right people leading the effort for them? Part of PC's job is to build the credibility required to be successful with these people on their terms. This involves not only responding to their articulated needs, but also building a relationship that allows us to redefine training as a value-added, performance-based business process which is critical to their efforts. They value numbers that demonstrate accomplishment of the specific, measurable goals for which each of them are compensated. In the end, we have to demonstrate with numbers what PC has done for them.

Another customer focus includes the employees who need knowledge and expertise. Meeting managerial expectations and leaving them satisfied are key requirements: senior managers want their people to feel as if they are being developed to do their job. Key employee populations that impact the strategic imperatives of increasing profitable revenue, improving customer service, and creating a winning culture were targeted as the highest priority. Specific initiatives were developed to strengthen and enhance employee performance.

PC's job is to help all customers understand PC as a partnership between the corporate management, local management, technical experts, performance consulting, and the individual. PC can only successfully meet their performance objectives when their partners fulfill their roles in supporting the desired performance. It might be compared to sitting at a performance roundtable, where each member is contributing their expertise, as illustrated in the following diagram. Every interaction with a training and performance consulting customer is an opportunity to educate them about the shift in training to performance consulting processes to better meet the mutual goal of performance improvement.

Figure 1. The Performance Roundtable

Systems View of Performance Consulting. A systems model of performance improvement means considering our external customer requirements and the performance required to delight the customer. This guided our search to identify the performance variables that impact customers, based on a performance analysis of which ways to improve our processes for impacting that performance, and considering our results. An overview of this system is outlined in the following diagram.

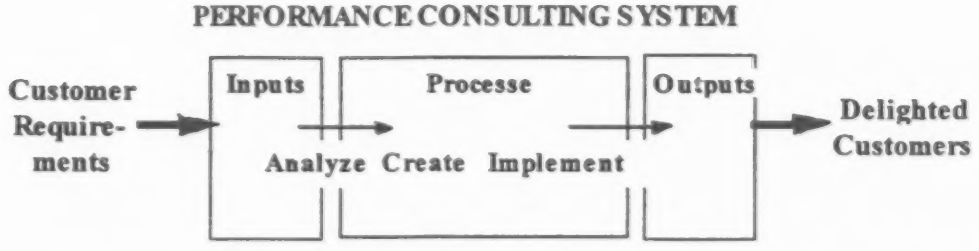

Figure 2. The Performance Consulting System

Where are we going?

Performance is the basis of the new HRD paradigm. Many training processes have focused on producing satisfaction as well as meeting the learning requirements of the organization. However, to meet the needs of the emerging organization, a performance-based approach is required. This

necessitated a consideration of performance-based tools such as are outlined in Analysis for Improving Performance: Tools for Diagnosing Organizations & Documenting Workplace Expertise by R. A. Swanson (1994), Improving Performance: How to Manage the White Space on the Organization Chart- 2nd Edition by G. A. Rummler and A. P. Brache (1995), and (based Forecasting Financial Benefits of Human Resource Development by R. A. Swanson and D. B. Gradous (1986). A basis for conducting a performance analysis is shown in the following diagram (based on Swanson, 1994, p. 52). The primary focus of training and development has traditionally been in the expertise/individual box. As shown in the Swanson model (1994, p. 51) many other factors affect performance. Yet, traditional training and development practices have failed to directly address the implications of these other factors, relegating them to other functions within the organization. If we expect managers and employees to assume a partnership role in training efforts, it is time for human resource professionals to assume a partnership role in non-training efforts. Distinguishing all the factors impacting performance is a cornerstone of the new relationship between performance consulting and its customers. In one of the first meetings the senior author had with a senior manager he commented on the poor training for newly hired sales representatives. I responded that I did not know whether or not the training they received was effective, but I did already know that there were serious product design, selection, pricing, strategy, and service problems affecting their performance. "You fix the non-training problems and I will fix the training issues," I promised. My response surprised him, in part because I demonstrated knowledge of the market and business, as well as the clear commitment to impact bottom-line results.

How are we going to make the journey?

What does it mean to run a performance improvement team versus a training and development department? It means redefining our role in understanding the business as well as reengineering our internal processes. It means basing our work on a theoretical model which can be proven/disproven or improved. Our work should be based on submitting our efforts to the rigor of scientific inquiry and to test its impact and results. It means reengineering our internal processes and structures to deliver real-time performance improvement interventions more efficiently and effectively.

We have been redefining how to balance the use of external and internal resources. Due to time constraints requiring short-term results, we are developing strategic partnerships with key vendors, rather than only building internal capabilities. We are not just buying programs, we are building partnerships so that vendors begin to operate much as internal resources would operate: knowing the business, customizing applications, assisting in scheduling and evaluation efforts.

We have been developing strategic partnerships with external sources for providing distance learning and computer-based training. Breakthroughs in technology provide a basis for creating more real-time, cost-effective approaches to each of the traditional aspects of training: assessment, design, development, implementation, and evaluation. One of the key questions we focus on is how to reengineer the training process to meet the current organization's performance requirements. For example, traditional needs assessment processes fail to provide data required for a broader performance-based approach. Often, traditional needs assessment approaches required the application of fast-cycle time technologies to be completed in a realistic time frame. The following diagram provides a framework in which to assess the capabilities required for the newly designed performance consulting team. In real life, the linear model is dynamically applied resulting in parallel activities. Caution is required such that assessment and evaluation are not simply removed from the process in an attempt to speed it up.

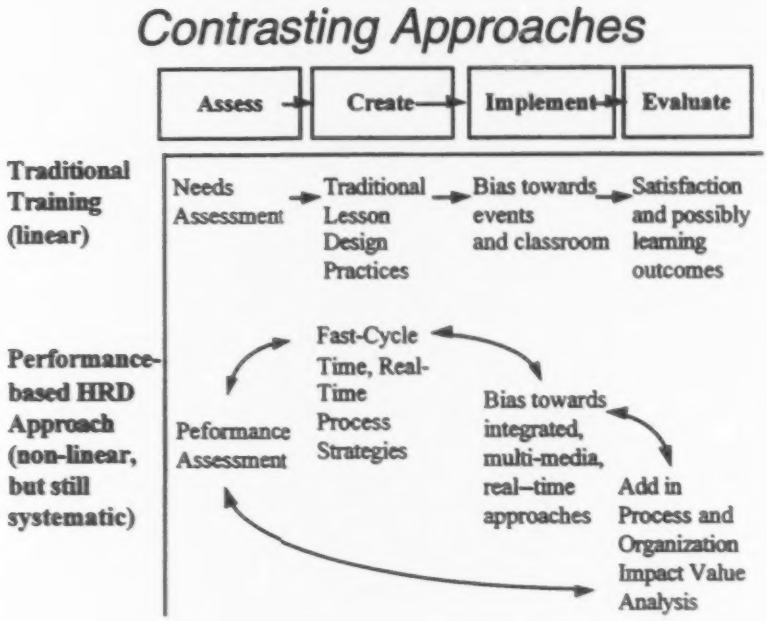

Figure 3. Contrasting Approaches to HRD

The trainer's role is moving from one of meeting planner and event-based designer to one of a business performance consultant, operating as a member of a multi-disciplined team representing such roles as home office management, field position management, compensation, recruiting, information systems, quality process champions, and business systems. Each person at the round table is an equal partner committed to improving performance. We ride a tight line: how do we transform our internal capabilities and skills while delivering immediate value to our business partners?

Evaluation and Value Analysis

Because of the focus on performance variables from the beginning, it is easier to assess the value of HRD on organizational outcomes. Traditional measures of satisfaction and learning at the individual level are still important. Unsatisfied clients and trainees would still be a problem in a performance-based approach. What is key to a performance-based system is that the performance impact be assessed at the process and organization levels as well. Performance-based HRD quantifies the impact of learning and behavior change on individual, process and organization performance.

In our example of new sales hires, we expect a performance gain for the HRD/performance improvement interventions. By quantifying the increase in performance, we can attribute a ROI for performance improvement intervention. In the past, within the training department there were satisfaction and some learning and behavior measures collected. No attempt was made to tie these measures to impact on performance, possibly due to an unclear understanding of how learning objectives impacted performance, and no direct demand from business partners to quantify the impact.

Conclusion

We are on the journey to becoming a performance-based human resource development team. The act of partnering has been critical The scholarship partnering within the journey and allows us to ask questions that end up challenging standard theory and standard practice ,neither of which appear to be adequate for the new performance improvement, business partner role of HRD.

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